GenCore version 5.1.6


OM nucleic - nucleic search, using sw model

Run on: January 22, 2005, 23:11:32 ; Search time 175 Seconds
(without alignments)
8285.768 Million cell updates/sec

Title: US-09-294-539-3
Perfect score: 2040
Sequence: 1 atggagccgccgaccagcca.....caaaaaaaaaaaaaaaaaaa 2040

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 824507 seqs, 355394441 residues

Total number of hits satisfying chosen parameters: 1649014

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | % Query Match | Length | DB | ID | Description |
|---|---|---|---|---|---|---|
| 1 | 590.2 | 28.9 | 1731 | 4 | US-09-519-232-3 | Sequence 3, Appli |
| 2 | 563.4 | 27.6 | 1767 | 4 | US-09-519-232-1 | Sequence 1, Appli |
| 3 | 562 | 27.5 | 2296 | 4 | US-09-519-232-63 | Sequence 63, Appl |
| 4 | 420.6 | 20.6 | 2011 | 2 | US-08-989-478-6 | Sequence 6, Appli |
| 5 | 420.6 | 20.6 | 2011 | 2 | US-08-989-478-7 | Sequence 7, Appli |
| 6 | 420.6 | 20.6 | 2011 | 3 | US-08-996-685-6 | Sequence 6, Appli |
| 7 | 420.6 | 20.6 | 2011 | 3 | US-08-996-685-7 | Sequence 7, Appli |
| 8 | 411.8 | 20.2 | 1608 | 2 | US-08-989-478-11 | Sequence 11, Appl |
| 9 | 411.8 | 20.2 | 1608 | 3 | US-08-996-685-11 | Sequence 11, Appl |
| 10 | 409.2 | 20.1 | 1597 | 2 | US-08-989-478-9 | Sequence 9, Appli |
| 11 | 409.2 | 20.1 | 1597 | 3 | US-08-996-685-9 | Sequence 9, Appli |
| 12 | 400.4 | 19.6 | 1194 | 2 | US-08-989-478-13 | Sequence 13, Appl |
| 13 | 400.4 | 19.6 | 1194 | 3 | US-08-996-685-13 | Sequence 13, Appl |
| 14 | 381.8 | 18.7 | 1740 | 4 | US-09-519-232-5 | Sequence 5, Appli |
| 15 | 380.4 | 18.6 | 1803 | 4 | US-09-519-232-19 | Sequence 19, Appl |
| 16 | 380.4 | 18.6 | 1818 | 4 | US-09-519-232-71 | Sequence 71, Appl |
| 17 | 359.8 | 17.6 | 653 | 4 | US-09-519-232-45 | Sequence 45, Appl |
| 18 | 344.2 | 16.9 | 659 | 4 | US-09-519-232-29 | Sequence 29, Appl |
| 19 | 315.8 | 15.5 | 1428 | 4 | US-09-569-804-1 | Sequence 1, Appli |
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| 21 | 311.8 | 15.3 | 2154 | 4 | US-09-551-778-1 | Sequence 1, Appli |
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| 31 | 264.8 | 13.0 | 786 | 2 | US-08-989-478-15 | Sequence 15, Appl |
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| 33 | 262 | 12.8 | 1761 | 4 | US-09-519-232-7 | Sequence 7, Appli |
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| 36 | 258.4 | 12.7 | 5655 | 3 | US-08-880-179-2 | Sequence 2, Appli |
| c 37 | 258.4 | 12.7 | 9919 | 3 | US-08-880-179-1 | Sequence 1, Appli |
| 38 | 243.4 | 11.9 | 2043 | 4 | US-09-533-029-118 | Sequence 118, App |
| 39 | 231.4 | 11.3 | 498 | 4 | US-09-519-232-41 | Sequence 41, Appl |
| 40 | 230.6 | 11.3 | 1385 | 4 | US-09-569-804-16 | Sequence 16, Appl |
| 41 | 230.4 | 11.3 | 2235 | 4 | US-09-569-804-20 | Sequence 20, Appl |
| 42 | 229 | 11.2 | 1725 | 4 | US-09-519-232-69 | Sequence 69, Appl |
| 43 | 205.4 | 10.1 | 1804 | 4 | US-09-519-232-17 | Sequence 17, Appl |
| 44 | 198.2 | 9.7 | 498 | 4 | US-09-519-232-57 | Sequence 57, Appl |
| 45 | 193.4 | 9.5 | 498 | 4 | US-09-519-232-31 | Sequence 31, Appl |

ALIGNMENTS

RESULT 1
US-09-519-232-3
; Sequence 3, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 1731
; TYPE: DNA
; ORGANISM: Lycopersicon esculentum
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1728)
; OTHER INFORMATION: Full length tomato cDNA sequence
US-09-519-232-3

Query Match 28.9%; Score 590.2; DB 4; Length 1731;
Best Local Similarity 65.2%; Pred. No. 2.8e-121;
Matches 906; Conservative 0; Mismatches 468; Indels 15; Gaps 2;

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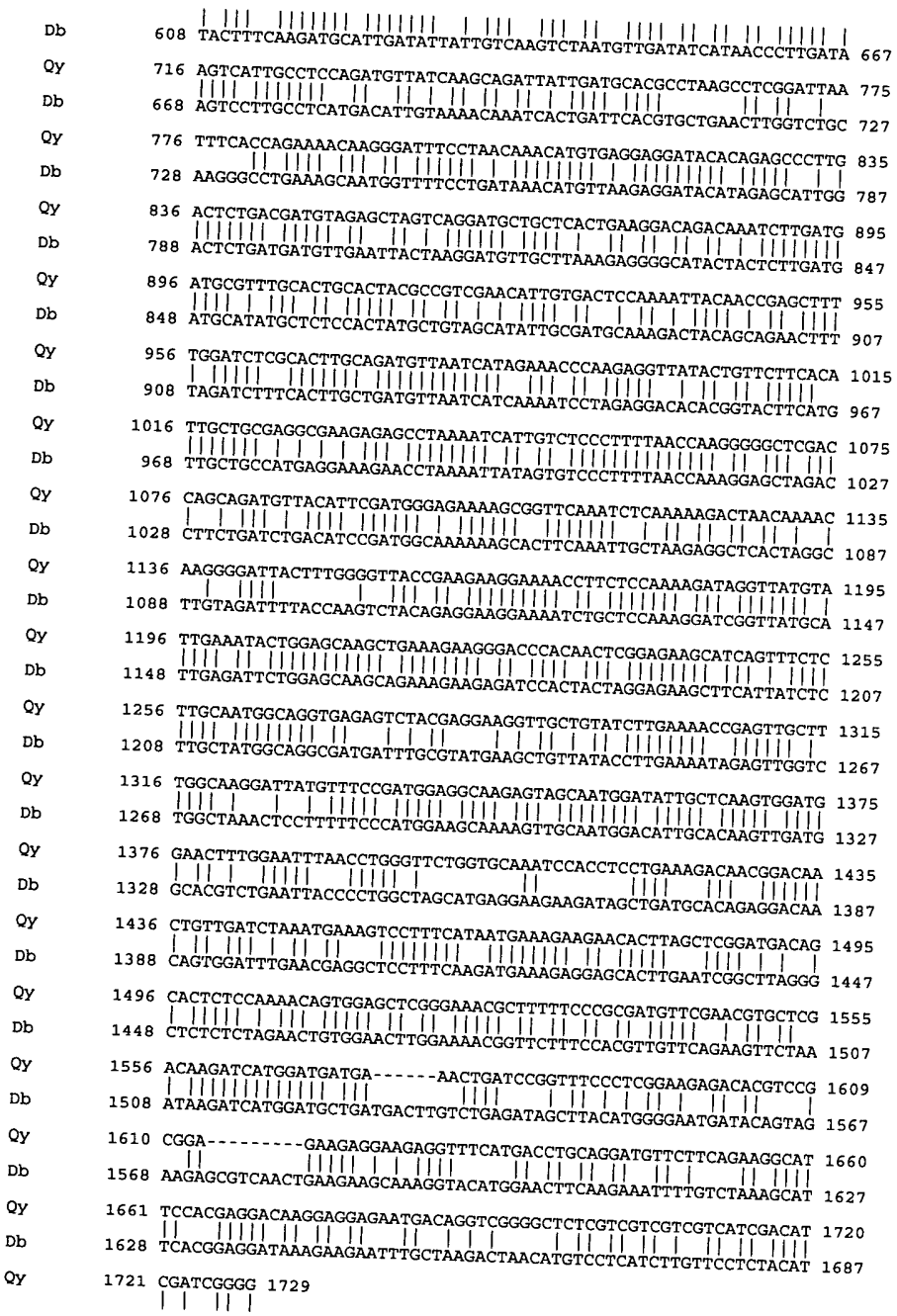

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RESULT 2
US-09-519-232-1
; Sequence 1, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 1767
; TYPE: DNA
; ORGANISM: Nicotiana tabacum
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1764)
; OTHER INFORMATION: Full length tobacco cDNA sequence
US-09-519-232-1

Query Match 27.6%; Score 563.4; DB 4; Length 1767;
Best Local Similarity 64.3%; Pred. No. 2.4e-115;
Matches 884; Conservative 0; Mismatches 476; Indels 15; Gaps 2;

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Qy       1196 TTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTC 1255
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Qy       1256 TTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTT 1315
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Qy       1316 TGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATG 1375
Db       1301 TGGCTAAACTCCTTTTTCCAATGGAAGCTAAAGTTGCAATGGACATTGCTCAAGTTGATG 1360

Qy       1376 GAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAA 1435
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Qy       1610 CGGA---------GAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCAT 1660
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RESULT 3
US-09-519-232-63
; Sequence 63, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 63
; LENGTH: 2296
; TYPE: DNA
; ORGANISM: Beta vulgaris
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (113)..(1927)
; OTHER INFORMATION: full-length Sugarbeet cDNA sequence
US-09-519-232-63

Query Match 27.5%; Score 562; DB 4; Length 2296;
Best Local Similarity 61.2%; Pred. No. 5.4e-115;
Matches 1014; Conservative 0; Mismatches 605; Indels 39; Gaps 5;

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Qy        146 AGGACTTCGCGTTCCTCGCCGACGCGCGCATCGCCGTCCCGGGCGGCGGCGGCGGCGGCG 205
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Qy        206 GCGACCTGCGGGTGCACCGCTGCGTGCTCTCCGCGCGGAGCCCCTTCCTGCGCGGCGTCT 265
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Qy        266 TCGCGCGCCGCGCCGCCGCCGCCGCGCGCAGGCGGCGGCGGCGAGGATGGCAGCGAGAGGCTGG 325
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Qy        326 AGCTCCGGGAGCTCCTCGGCGGCGGCGGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGC 385
Db        491 AAGCTTGAG-----CTTAAGGATTTAGCTGGTGATTTTGAGGTTGGATTTGATTCGGTTG 545

Qy        386 GGCTGGTGCTCGACTACCTCTACAGCGGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCC 445
Db        546 TTGCGGTTTTAGGTTATTTGTATAGTGGCAAAGTTAGGAATTTGCCTAGAGGAATTTGTG 605

Qy        446 TCTGCGTCGACGAGGACTGCGCCCACGTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGC 505
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Qy        986 GAAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCA 1045
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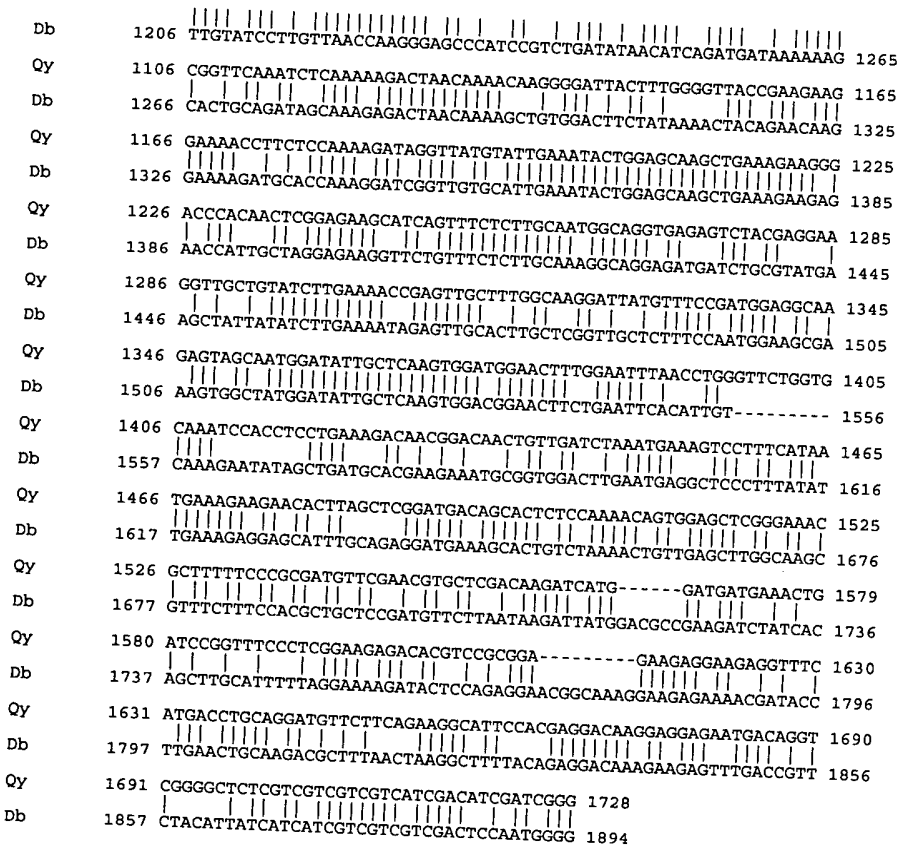
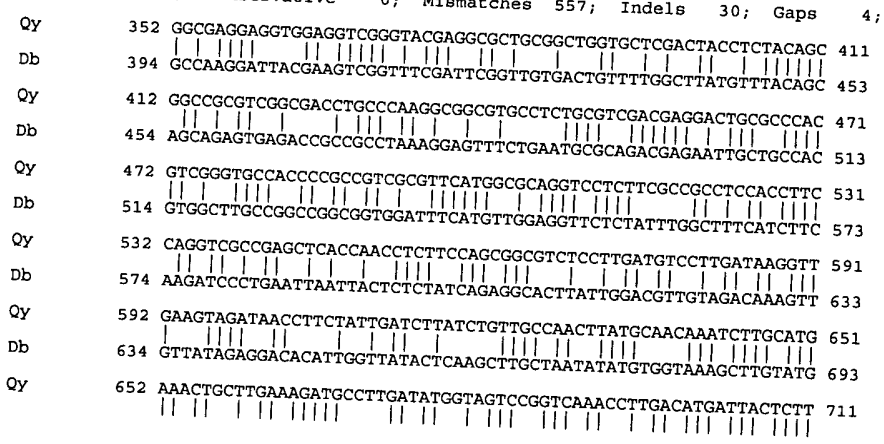



RESULT 4
US-08-989-478-6
; Sequence 6, Application US/08989478
; Patent No. 5986082
; GENERAL INFORMATION:
; APPLICANT: Uknes, Scott
; APPLICANT: Hunt, Michelle
; APPLICANT: Steiner, Henry-York
; APPLICANT: Ryals, John
; TITLE OF INVENTION: ALTERED FORMS OF THE NIM1 GENE CONFERRING
; TITLE OF INVENTION: DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 5986082artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 5986082th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/989,478
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/033,177
; FILING DATE: 13-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,382
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,730
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,021
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,022
; FILING DATE: 10-JAN-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Meigs, J. Timothy
; REGISTRATION NUMBER: 38,241
; REFERENCE/DOCKET NUMBER: PF/5-21214/P1/CGC1911
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (919) 541-8587
; TELEFAX: (919) 541-8689
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2011 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; ORIGINAL SOURCE:
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 1..2011
; OTHER INFORMATION: /note= "NIM1 cDNA sequence"
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 43..1824
; OTHER INFORMATION: /product= "NIM1 protein"
US-08-989-478-6

Query Match 20.6%; Score 420.6; DB 2; Length 2011;
Best Local Similarity 58.4%; Pred. No. 1e-83;
Matches 823; Conservative 0; Mismatches 557; Indels 30; Gaps 4;



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Db        754 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 813

Qy        772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
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Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
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Db        922 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 981

Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
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Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
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Db       1042 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1101

Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
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Qy       1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
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Qy       1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
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Db       1222 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1281

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Db       1282 TCTTTTGCAGTGGCGGCCGATGAATTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTT 1341

Qy       1312 GCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG 1371
              ||  | ||       | | ||||| | ||| |||  ||  |||||||| || ||  || ||
Db       1342 GCACTTGCTCAACGTCTTTTTCCAACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATG 1401

Qy       1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428
                | ||||| |  || || |   ||    |    |  | | |  |   ||| |   |
Db       1402 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1461

Qy       1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488
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Qy       1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAAC 1548
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Db       1522 CTAAAAGCGCTTTCTAAAACCGTGGAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCA 1581

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Qy       1603 ACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653
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Qy       1654 AAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCA 1713
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RESULT 5
US-08-989-478-7
; Sequence 7, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2011 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1824
;      OTHER INFORMATION:  /product= "altered form of NIM1"
;      OTHER INFORMATION:  /note= "Serine residues at amino acid positions 55 and 59 in
;      OTHER INFORMATION:  wild-type NIM1 gene product have been changed to Alanine
;      OTHER INFORMATION:  residues."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  205..217
;      OTHER INFORMATION:  /note= "nucleotides 205 and 217
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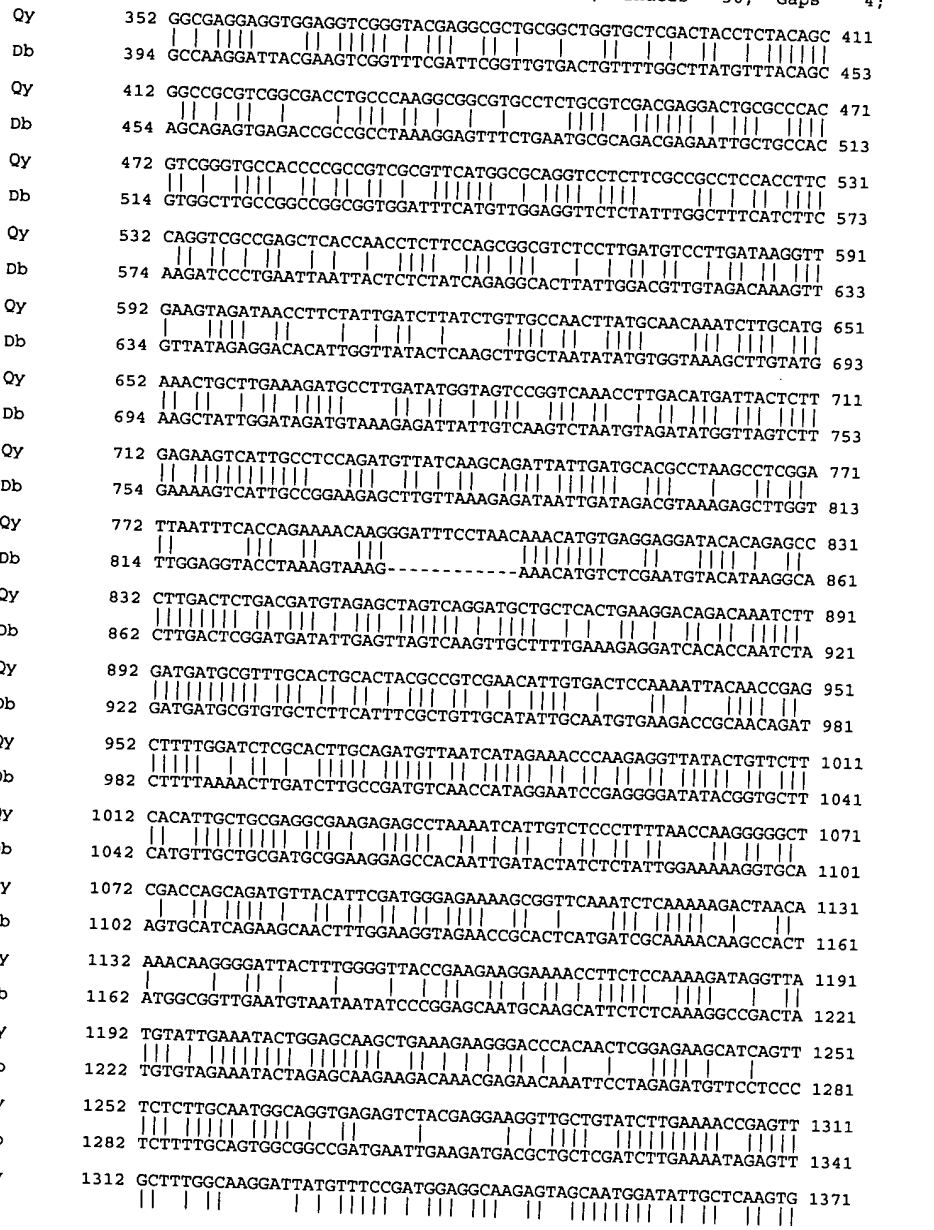
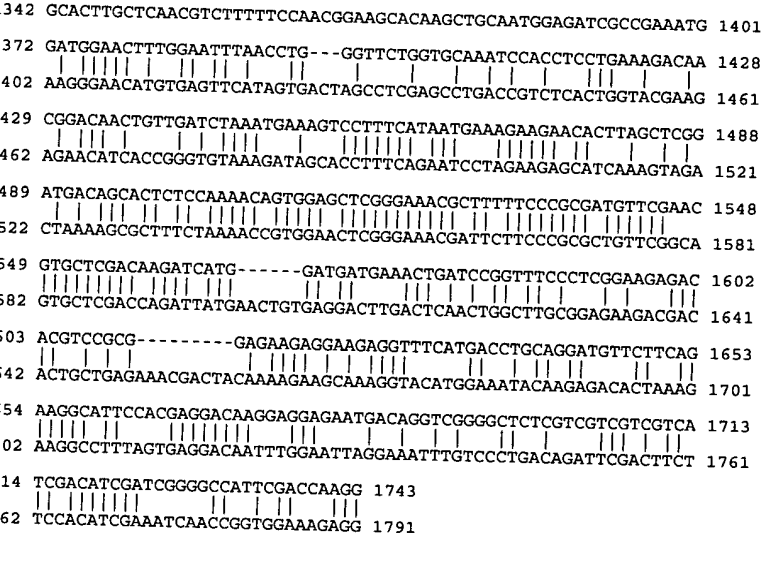
; OTHER INFORMATION: changed from T's to G's compared to wild-type sequence."
US-08-989-478-7

Query Match 20.6%; Score 420.6; DB 2; Length 2011;
Best Local Similarity 58.4%; Pred. No. 1e-83;
Matches 823; Conservative 0; Mismatches 557; Indels 30; Gaps 4;





RESULT 6
US-08-996-685-6
; Sequence 6, Application US/08996685
; Patent No. 6031153
; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Friedrich, Leslie
; APPLICANT: Uknes, Scott
; APPLICANT: Molina, Antonio
; APPLICANT: Ruess, Wilhelm
; APPLICANT: Knauf-Beiter, Gertrude
; APPLICANT: Kung, Ruth
; APPLICANT: Kessmann, Helmut
; APPLICANT: Oostendorp, Michael
; TITLE OF INVENTION: METHOD FOR PROTECTING PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 6031153artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 6031153th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/996,685
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/761,543
; FILING DATE: 6-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,378
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:

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;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2011 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
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;      ORGANISM:  Arabidopsis thaliana
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;      NAME/KEY:  misc_feature
;      LOCATION:  1..2011
;      OTHER INFORMATION:  /note= "NIM1 cDNA sequence"
;    FEATURE:
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;      OTHER INFORMATION:  /product= "NIM1 protein"
US-08-996-685-6

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  Best Local Similarity   58.4%;  Pred. No. 1e-83;
  Matches  823;  Conservative    0;  Mismatches  557;  Indels   30;  Gaps    4;

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Qy        412 GGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCAC 471
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Qy        472 GTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTC 531
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Db        514 GTGGCTTGCCGGCCGGCGGTGGATTTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTC 573

Qy        532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
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Qy        592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
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Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
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Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
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Db        754 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 813

Qy        772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
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Qy        832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
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Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
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Db        982 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1041

Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
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Qy       1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
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Db       1162 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1221

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Qy       1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428
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Db       1402 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1461

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Db       1462 AGAACATCACCGGGTGTAAAGATAGCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGA 1521

Qy       1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAAC 1548
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Db       1582 GTGCTCGACCAGATTATGAACTGTGAGGACTTGACTCAACTGGCTTGCGGAGAAGACGAC 1641

Qy       1603 ACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653
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Db       1702 AAGGCCTTTAGTGAGGACAATTTGGAATTAGGAAATTTGTCCCTGACAGATTCGACTTCT 1761

Qy       1714 TCGACATCGATCGGGGCCATTCGACCAAGG 1743
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Db       1762 TCCACATCGAAATCAACCGGTGGAAAGAGG 1791


RESULT 7
US-08-996-685-7
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; Sequence 7, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
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;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
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;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
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;      FILING DATE:  10-JAN-1997
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;      FILING DATE:  10-JAN-1997
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;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2011 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1824
;      OTHER INFORMATION:  /product= "altered form of NIM1"
;      OTHER INFORMATION:  /note= "Serine residues at amino acid positions 55 and 59 in
;      OTHER INFORMATION:  wild-type NIM1 gene product have been changed to Alanine
;      OTHER INFORMATION:  residues."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  205..217
;      OTHER INFORMATION:  /note= "nucleotides 205 and 217
;      OTHER INFORMATION:  changed from T's to G's compared to wild-type sequence."
US-08-996-685-7

  Query Match             20.6%;  Score 420.6;  DB 3;  Length 2011;
  Best Local Similarity   58.4%;  Pred. No. 1e-83;
  Matches  823;  Conservative    0;  Mismatches  557;  Indels   30;  Gaps    4;

Qy       352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411
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Qy       472 GTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTC 531
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Qy       532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
Db       574 AAGATCCCTGAATTAATTACTCTCTATCAGAGGCACTTATTGGACGTTGTAGACAAAGTT 633

Qy       592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
Db       634 GTTATAGAGGACACATTGGTTATACTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATG 693

Qy       652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
Db       694 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 753

Qy       712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
Db       754 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 813

Qy       772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
Db       814 TTGGAGGTACCTAAAGTAAAG----------AAACATGTCTCGAATGTACATAAGGCA 861

Qy       832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
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Qy       892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
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Qy       952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
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Qy      1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
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Qy      1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
Db      1162 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1221

Qy      1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
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Db       1222 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1281

Qy       1252 TCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTT 1311

Db       1282 TCTTTTGCAGTGGCGGCCGATGAATTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTT 1341

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Qy       1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428

Db       1402 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1461

Qy       1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488

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Qy       1549 GTGCTCGACAAGATCATG------GATGATGAAACTGATCCGGTTTCCCTCGGAAGAGAC 1602

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Db       1762 TCCACATCGAAATCAACCGGTGGAAAGAGG 1791


RESULT 8
US-08-989-478-11
; Sequence 11, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1608 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1608
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "C-terminal deletion compared to wild-type NIM1."
US-08-989-478-11

  Query Match             20.2%;  Score 411.8;  DB 2;  Length 1608;
  Best Local Similarity   59.8%;  Pred. No. 8.4e-82;
  Matches  730;  Conservative    0;  Mismatches  475;  Indels   15;  Gaps    2;

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Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711

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Db       1042 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1101

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Db       1102 AGTGCATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1161

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Db       1222 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1281

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Db       1282 TCTTTTGCAGTGGCGGCCGATGAATTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTT 1341

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RESULT 9
US-08-996-685-11
; Sequence 11, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1608 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1608
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "C-terminal deletion compared to wild-type NIM1."
US-08-996-685-11

  Query Match           20.2%;  Score 411.8;  DB 3;  Length 1608;
  Best Local Similarity  59.8%;  Pred. No. 8.4e-82;
  Matches  730;  Conservative    0;  Mismatches  475;  Indels   15;  Gaps    2;

Qy        352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411
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Db        454 AGCAGAGTGAGACCGCCGCCTAAAGGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCAC 513

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Qy        532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
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Qy        592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
Db        634 GTTATAGAGGACACATTGGTTATACTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATG 693

Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
Db        694 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 753

Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
Db        754 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 813

Qy        772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
Db        814 TTGGAGGTACCTAAAGTAAAG----------AAACATGTCTCGAATGTACATAAGGCA 861

Qy        832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
Db        862 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 921

Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
Db        922 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 981

Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
Db        982 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1041

Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
Db       1042 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1101

Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
Db       1102 AGTGCATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1161

Qy       1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
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Qy       1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488
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Qy       1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAAC 1548
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US-08-989-478-9
; Sequence 9, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1597 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1410
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "N-terminal deletion compared to wild-type NIM1
;      OTHER INFORMATION:  sequence."
US-08-989-478-9

  Query Match             20.1%;  Score 409.2;  DB 2;  Length 1597;
  Best Local Similarity   58.3%;  Pred. No. 3.1e-81;
  Matches  808;  Conservative    0;  Mismatches  548;  Indels   30;  Gaps    4;

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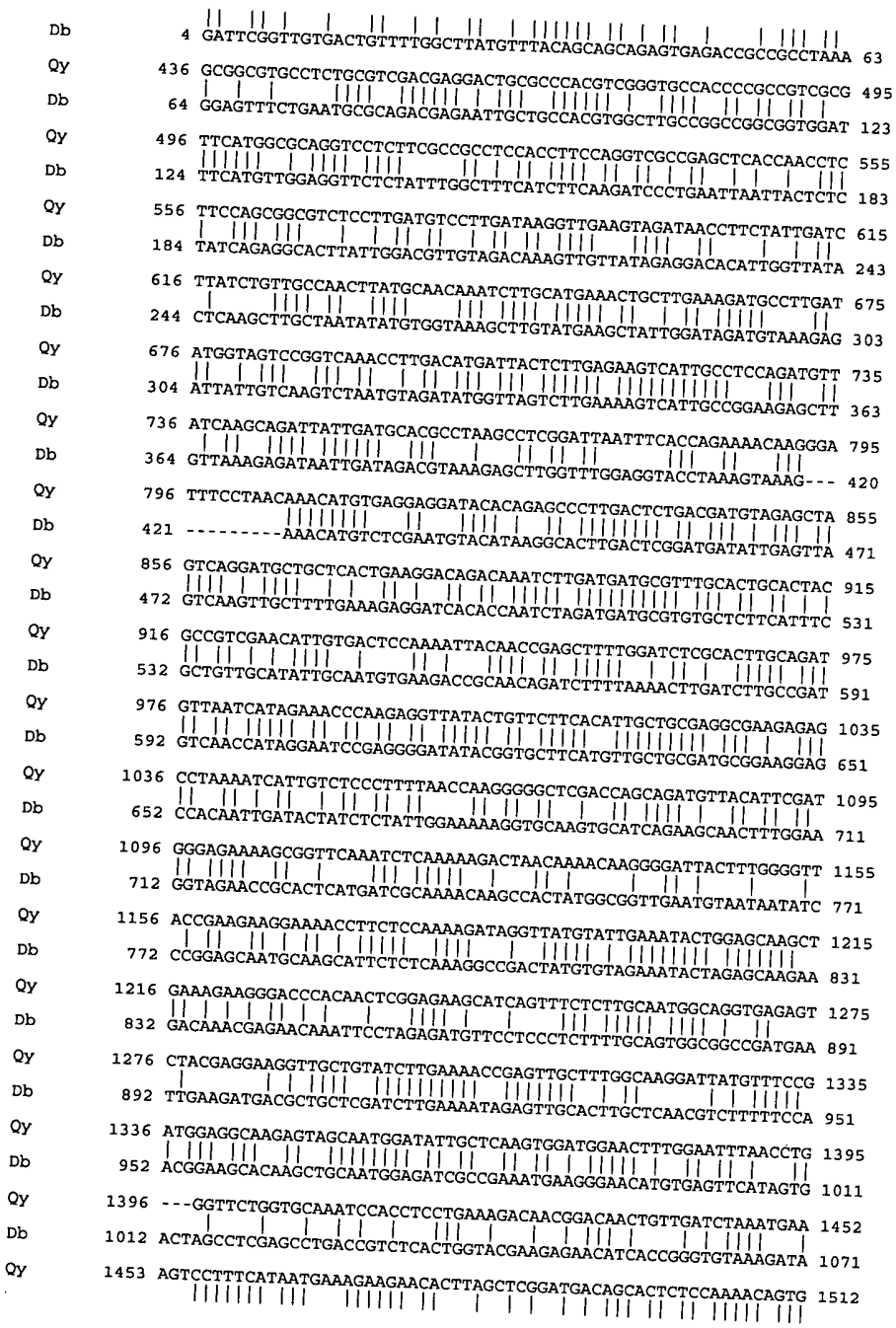

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Qy        796 TTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTGACTCTGACGATGTAGAGCTA 855
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Qy        976 GTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAG 1035
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Qy       1036 CCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGACCAGCAGATGTTACATTCGAT 1095
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Qy       1096 GGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTT 1155
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Qy       1216 GAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGT 1275
Db        832 GACAAACGAGAACAAATTCCTAGAGATGTTCCTCCCTCTTTTGCAGTGGCGGCCGATGAA 891
Qy       1276 CTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCG 1335
Db        892 TTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTTGCACTTGCTCAACGTCTTTTTCCA 951
Qy       1336 ATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTG 1395
Db        952 ACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATGAAGGGAACATGTGAGTTCATAGTG 1011
Qy       1396 ---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAACTGTTGATCTAAATGAA 1452
Db       1012 ACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAGAGAACATCACCGGGTGTAAAGATA 1071
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Qy       1678 GAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCATCGACATCGATCGGGGCCATTCGA 1737
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; Sequence 9, Application US/08996685
; Patent No. 6031153
; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Friedrich, Leslie
; APPLICANT: Uknes, Scott
; APPLICANT: Molina, Antonio
; APPLICANT: Ruess, Wilhelm
; APPLICANT: Knauf-Beiter, Gertrude
; APPLICANT: Kung, Ruth
; APPLICANT: Kessmann, Helmut
; APPLICANT: Oostendorp, Michael
; TITLE OF INVENTION: METHOD FOR PROTECTING PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 6031153artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 6031153th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/996,685
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/761,543
; FILING DATE: 6-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,378
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,382
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,730
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,021
; FILING DATE: 10-JAN-1997

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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1597 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1410
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "N-terminal deletion compared to wild-type NIM1
;      OTHER INFORMATION:  sequence."
US-08-996-685-9

  Query Match             20.1%;  Score 409.2;  DB 3;  Length 1597;
  Best Local Similarity   58.3%;  Pred. No. 3.1e-81;
  Matches  808;  Conservative    0;  Mismatches  548;  Indels   30;  Gaps    4;

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Db        1012 ACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAGAGAACATCACCGGGTGTAAAGATA 1071

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              || |||||||||| || |||||||| ||||||   |||||||| |||| |||
Db        1132 GAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCAGTGCTCGACCAGATTATGAACTGT 1191

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Db        1192 GAGGACTTGACTCAACTGGCTTGCGGAGAAGACGACACTGCTGAGAAACGACTACAAAAG 1251

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Db        1252 AAGCAAAGGTACATGGAAATACAAGAGACACTAAAGAAGGCCTTTAGTGAGGACAATTTG 1311

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Db        1312 GAATTAGGAAATTTGTCCCTGACAGATTCGACTTCTTCCACATCGAAATCAACCGGTGGA 1371

Qy       1738 CCAAGG 1743
                 |||
Db        1372 AAGAGG 1377


RESULT 12
US-08-989-478-13
; Sequence 13, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
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;       STREET:  3054 Cornwallis Road
;       CITY:  Research Triangle Park
;       STATE:  No. 5986082th Carolina
;       COUNTRY:  USA
;       ZIP:  27709
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/989,478
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/033,177
;       FILING DATE:  13-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,379
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,382
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,730
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,021
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,022
;       FILING DATE:  10-JAN-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Meigs, J. Timothy
;       REGISTRATION NUMBER:  38,241
;       REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (919) 541-8587
;       TELEFAX:  (919) 541-8689
;   INFORMATION FOR SEQ ID NO:  13:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  1194 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  cDNA
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  1..1194
;       OTHER INFORMATION:  /product= "Altered form of NIM1"
;       OTHER INFORMATION:  /note= "N-terminal/C-terminal chimera."
US-08-989-478-13

  Query Match           19.6%;  Score 400.4;  DB 2;  Length 1194;
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  Matches  715;  Conservative    0;  Mismatches  466;  Indels   15;  Gaps    2;

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Qy        436 GCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCGGGTGCCACCCCGCCGTCGCG 495
Db         64 GGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCACGTGGCTTGCCGGCCGGCGGTGGAT 123

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Db        124 TTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTCAAGATCCCTGAATTAATTACTCTC 183

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Db        184 TATCAGAGGCACTTATTGGACGTTGTAGACAAAGTTGTTATAGAGGACACATTGGTTATA 243

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Db        304 ATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTTGAAAAGTCATTGCCGGAAGAGCTT 363

Qy        736 ATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAATTTCACCAGAAAACAAGGGA 795
Db        364 GTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGTTTGGAGGTACCTAAAGTAAAG--- 420

Qy        796 TTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTGACTCTGACGATGTAGAGCTA 855
Db        421 ---------AAACATGTCTCGAATGTACATAAGGCACTTGACTCGGATGATATTGAGTTA 471

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Db        472 GTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTAGATGATGCGTGTGCTCTTCATTTC 531

Qy        916 GCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTTTGGATCTCGCACTTGCAGAT 975
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RESULT 13
US-08-996-685-13
; Sequence 13, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
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;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  13:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1194 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1194
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "N-terminal/C-terminal chimera."
US-08-996-685-13

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              || | | | || | |   |  |||| |  |   ||| ||||| |||| |  ||
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Qy       1276 CTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCG 1335
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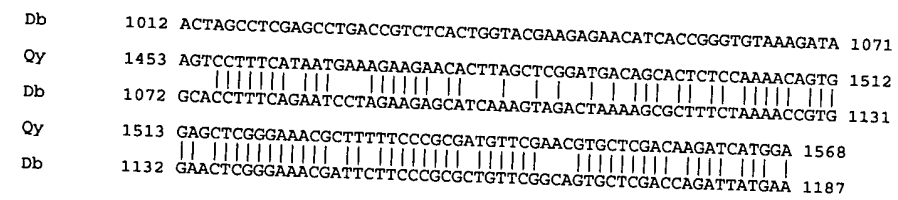

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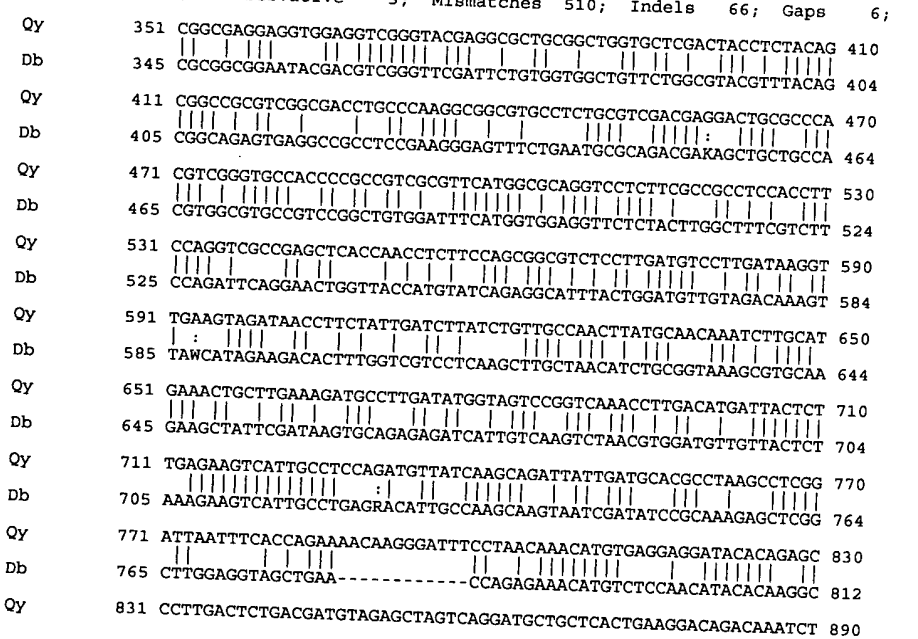
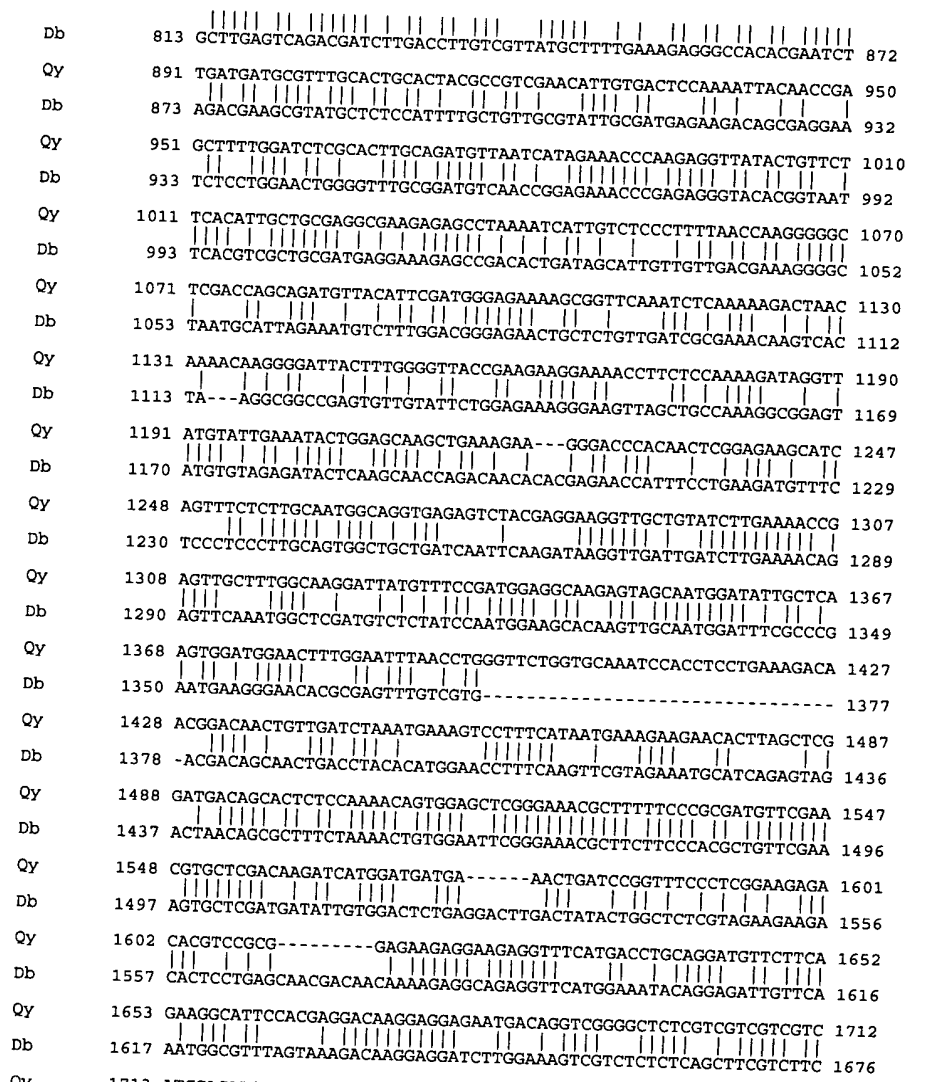
; Sequence 5, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 1740
; TYPE: DNA
; ORGANISM: Brassica napus
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1737)
; OTHER INFORMATION: Canola cDNA sequence
US-09-519-232-5

Query Match 18.7%; Score 381.8; DB 4; Length 1740;
Best Local Similarity 58.4%; Pred. No. 3.8e-75;
Matches 812; Conservative 3; Mismatches 510; Indels 66; Gaps 6;





RESULT 15
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; Sequence 19, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye

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;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: S-30857A/RTP2095
;  CURRENT APPLICATION NUMBER: US/09/519,232
;  CURRENT FILING DATE: 2000-03-06
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 19
;   LENGTH: 1803
;   TYPE: DNA
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;   NAME/KEY: CDS
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;   OTHER INFORMATION: AtNMLc4-2 genomic sequence
US-09-519-232-19

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Qy        651 GAAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCT 710
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| 2 | 1627.2 | 79.8 | 1848 | 17 | US-10-437-963-51266 | Sequence 51266, A |
| 3 | 928.4 | 45.5 | 1773 | 16 | US-10-374-780A-596 | Sequence 596, App |
| 4 | 925.2 | 45.4 | 1767 | 18 | US-10-425-115-61591 | Sequence 61591, A |
| 5 | 671.8 | 32.9 | 1326 | 16 | US-10-425-114-32356 | Sequence 32356, A |
| 6 | 598.6 | 29.3 | 633 | 16 | US-10-374-780A-595 | Sequence 595, App |
| 7 | 590.2 | 28.9 | 1731 | 15 | US-10-328-675A-3 | Sequence 3, Appli |
| 8 | 563.4 | 27.6 | 1767 | 15 | US-10-328-675A-1 | Sequence 1, Appli |
| 9 | 563.4 | 27.6 | 2172 | 8 | US-08-908-884-13 | Sequence 13, Appl |
| 10 | 563.4 | 27.6 | 2172 | 9 | US-09-908-323-13 | Sequence 13, Appl |
| 11 | 562 | 27.5 | 2296 | 15 | US-10-328-675A-63 | Sequence 63, Appl |
| 12 | 447.2 | 21.9 | 461 | 17 | US-10-437-963-51264 | Sequence 51264, A |
| 13 | 442.2 | 21.7 | 614 | 17 | US-10-767-701-21927 | Sequence 21927, A |
| 14 | 422.2 | 20.7 | 2104 | 8 | US-08-908-884-2 | Sequence 2, Appli |
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| 16 | 422.2 | 20.7 | 2104 | 10 | US-09-934-455-73 | Sequence 73, Appl |
| 17 | 422.2 | 20.7 | 2104 | 15 | US-10-225-068-241 | Sequence 241, App |
| 18 | 422.2 | 20.7 | 2104 | 15 | US-10-225-066A-953 | Sequence 953, App |
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| 21 | 380.4 | 18.6 | 1803 | 15 | US-10-328-675A-19 | Sequence 19, Appl |
| 22 | 380.4 | 18.6 | 1818 | 15 | US-10-328-675A-71 | Sequence 71, Appl |
| 23 | 380.4 | 18.6 | 2083 | 10 | US-09-934-455-433 | Sequence 433, App |
| 24 | 380.4 | 18.6 | 2083 | 16 | US-10-374-780A-2091 | Sequence 2091, Ap |
| 25 | 380.4 | 18.6 | 2083 | 16 | US-10-412-699B-813 | Sequence 813, App |
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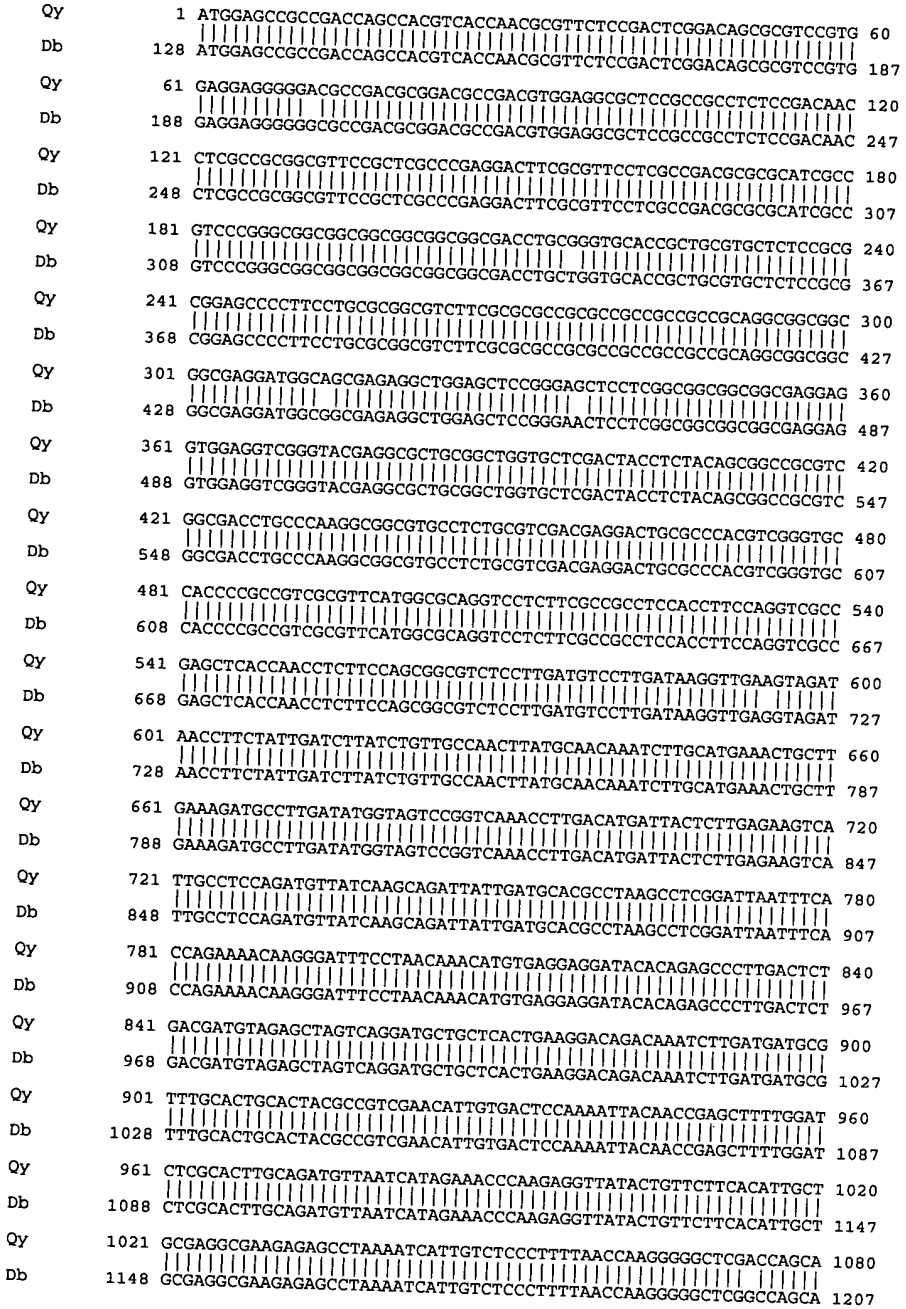
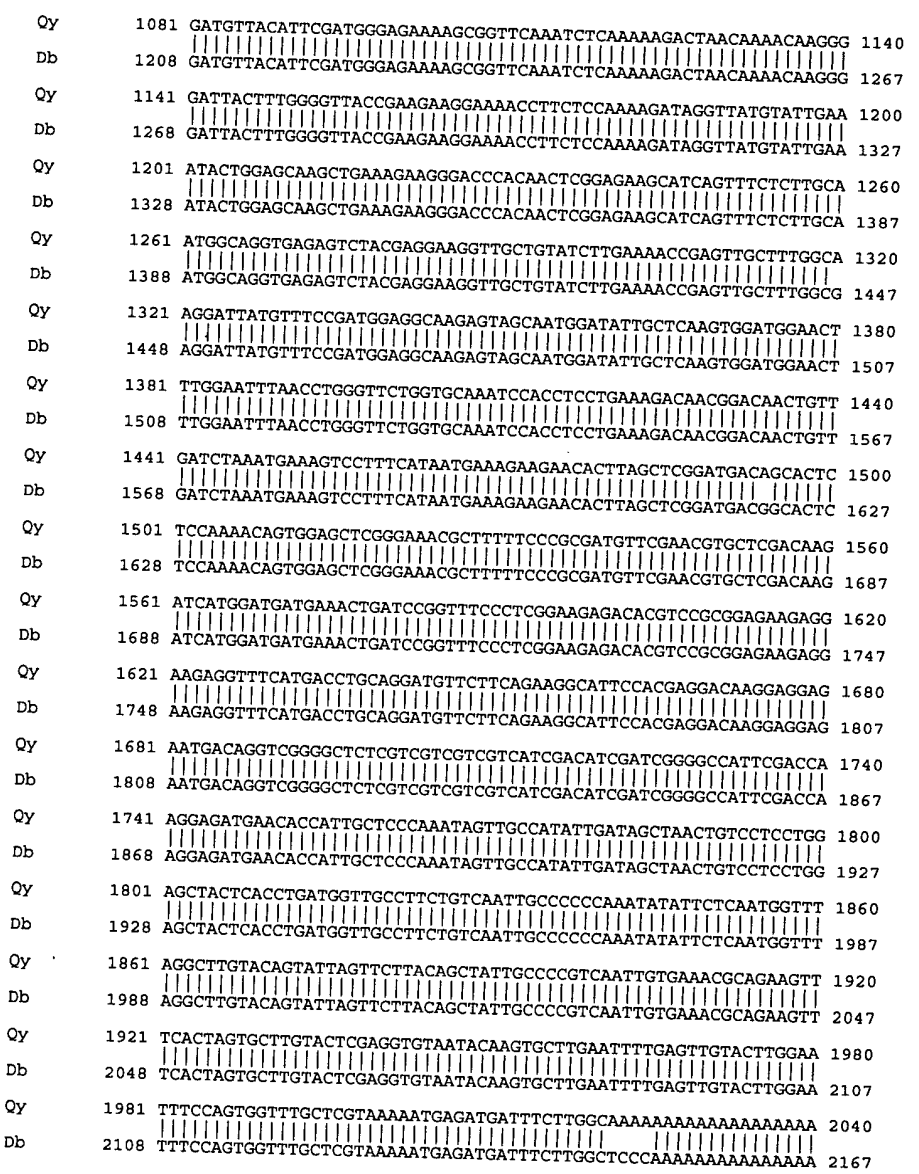
| 28 | 351.6 | 17.2 | 2717 | 10 | US-09-848-841-15 | Sequence 15, Appl |
| 29 | 344.2 | 16.9 | 659 | 15 | US-10-328-675A-29 | Sequence 29, Appl |
| 30 | 333.6 | 16.4 | 1769 | 16 | US-10-425-114-29122 | Sequence 29122, A |
| 31 | 333.6 | 16.4 | 1842 | 16 | US-10-374-780A-1460 | Sequence 1460, Ap |
| 32 | 333.6 | 16.4 | 1853 | 16 | US-10-424-599-21385 | Sequence 21385, A |
| 33 | 317.2 | 15.5 | 2069 | 10 | US-09-848-841-11 | Sequence 11, Appl |
| 34 | 315.8 | 15.5 | 1428 | 15 | US-10-318-780-1 | Sequence 1, Appli |
| 35 | 315.8 | 15.5 | 2368 | 15 | US-10-318-780-2 | Sequence 2, Appli |
| 36 | 311.8 | 15.3 | 2154 | 13 | US-10-047-593-1 | Sequence 1, Appli |
| 37 | 311.4 | 15.3 | 2673 | 15 | US-10-328-675A-73 | Sequence 73, Appl |
| 38 | 309.8 | 15.2 | 1830 | 15 | US-10-318-780-6 | Sequence 6, Appli |
| 39 | 309.8 | 15.2 | 2120 | 15 | US-10-318-780-8 | Sequence 8, Appli |
| 40 | 306.2 | 15.0 | 1824 | 15 | US-10-318-780-5 | Sequence 5, Appli |
| 41 | 306.2 | 15.0 | 2420 | 15 | US-10-318-780-7 | Sequence 7, Appli |
| 42 | 294.4 | 14.4 | 651 | 16 | US-10-424-599-132686 | Sequence 132686, |
| 43 | 293.2 | 14.4 | 1940 | 17 | US-10-767-701-13173 | Sequence 13173, A |
| 44 | 277 | 13.6 | 498 | 15 | US-10-328-675A-37 | Sequence 37, Appl |
| 45 | 276.6 | 13.6 | 498 | 15 | US-10-328-675A-39 | Sequence 39, Appl |

ALIGNMENTS

RESULT 1
US-09-848-841-9
; Sequence 9, Application US/09848841
; Publication No. US20030172411A1
; GENERAL INFORMATION:
; APPLICANT: E. I. du Pont de Nemours and Company
; APPLICANT: Butler, Karla
; APPLICANT: Falco, Carl
; APPLICANT: Famodu, Omolayo O.
; APPLICANT: Fang, Yiwen
; APPLICANT: Han, Feng
; APPLICANT: Heppard, Elmer
; APPLICANT: Liu, Zhan-Bin
; APPLICANT: Miao, Gou-Hau
; APPLICANT: Odell, Joan
; APPLICANT: Rafalski, Antoni
; TITLE OF INVENTION: Disease Resistance Factors
; FILE REFERENCE: BB1252 US NA1
; CURRENT APPLICATION NUMBER: US/09/848,841
; CURRENT FILING DATE: 2001-05-04
; PRIOR APPLICATION NUMBER: 60/107,242
; PRIOR FILING DATE: 1998-11-05
; PRIOR APPLICATION NUMBER: US99/25,953
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 9
; LENGTH: 2194
; TYPE: DNA
; ORGANISM: Oryza sativa
US-09-848-841-9

Query Match 99.1%; Score 2020.8; DB 10; Length 2194;
Best Local Similarity 99.4%; Pred. No. 0;
Matches 2028; Conservative 0; Mismatches 12; Indels 0; Gaps 0;





RESULT 2
US-10-437-963-51266
; Sequence 51266, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
; APPLICANT: La Rosa, Thomas J.
; APPLICANT: Kovalic, David K.
; APPLICANT: Zhou, Yihua

```
;  APPLICANT:  Cao, Yongwei
;  APPLICANT:  Wu, Wei
;  APPLICANT:  Boukharov, Andrey A.
;  APPLICANT:  Barbazuk, Brad
;  APPLICANT:  Li, Ping
;  TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
;  TITLE OF INVENTION:  Plants and Uses Thereof for Plant Improvement
;  FILE REFERENCE: 38-21(53221)B
;  CURRENT APPLICATION NUMBER: US/10/437,963
;  CURRENT FILING DATE:  2003-05-14
;  NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 51266
;   LENGTH: 1848
;   TYPE: DNA
;   ORGANISM: Oryza sativa
;   FEATURE:
;   OTHER INFORMATION: Clone ID: PAT_MRT4530_53675C.1
US-10-437-963-51266

  Query Match             79.8%;  Score 1627.2;  DB 17;  Length 1848;
  Best Local Similarity   94.2%;  Pred. No. 0;
  Matches 1741;  Conservative    0;  Mismatches    8;  Indels   99;  Gaps    1;

Qy          1 ATGGAGCCGCCGACCAGCCACGTCACCAACGCGTTCTCCGACTCGGACAGCGCGTCCGTG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGGAGCCGCCGACCAGCCACGTCACCAACGCGTTCTCCGACTCGGACAGCGCGTCCGTG 60

Qy         61 GAGGAGGGGGACGCCGACGCGGACGCCGACGTGGAGGCGCTCCGCCGCCTCTCCGACAAC 120
              |||||||||| |||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GAGGAGGGGGGCGCCGACGCGGACGCCGACGTGGAGGCGCTCCGCCGCCTCTCCGACAAC 120

Qy        121 CTCGCCGCGGCGTTCCGCTCGCCCGAGGACTTCGCGTTCCTCGCCGACGCGCGCATCGCC 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CTCGCCGCGGCGTTCCGCTCGCCCGAGGACTTCGCGTTCCTCGCCGACGCGCGCATCGCC 180

Qy        181 GTCCCGGGCGGCGGCGGCGGCGGCGGCGACCTGCGGGTGCACCGCTCGTGCTCTCCGCG 240
              |||||||||||||||||||||||||||||||| ||||||||||||||||||||||||||
Db        181 GTCCCGGGCGGCGGCGGCGGCGGCGGCGACCTGCTGGTGCACCGCTGCGTGCTCTCCGCG 240

Qy        241 CGGAGCCCCTTCCTGCGCGGCGTCTTCGCGCGCCGCGCCGCCGCCGCCGCAGGCGGCGGC 300
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Db        241 CGGAGCCCCTTCCTGCGCGGCGTCTTCGCGCGCCGCGCCGCCGCCGCCGCAGGCGGCGGC 300

Qy        301 GGCGAGGATGGCAGCGAGAGGCTGGAGCTCCGGGAGCTCCTCGGCGGCGGCGGCGAGGAG 360
              |||||||||||| |||||||||||||||||||| |||||||||||||||||||||||||
Db        301 GGCGAGGATGGCGGCGAGAGGCTGGAGCTCCGGGAACTCCTCGGCGGCGGCGGCGAGGAG 360

Qy        361 GTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGCGGCCGCGTC 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 GTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGCGGCCGCGTC 420

Qy        421 GGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCGGGTGC 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 GGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCGGGTGC 480

Qy        481 CACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGGTCGCC 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGGTCGCC 540

Qy        541 GAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAGTAGAT 600
              |||||||||||||||||||||||||||||||||||||||||||||||||| ||||||
Db        541 GAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAGGTAGAT 600

Qy        601 AACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAACTGCTT 660
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 AACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAACTGCTT 660

Qy        661 GAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGAAGTCA 720
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        661 GAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGAAGTCA 720

Qy        721 TTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAATTTCA 780
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        721 TTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAATTTCA 780

Qy        781 CCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTGACTCT 840
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        781 CCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTGACTCT 840

Qy        841 GACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATGATGCG 900
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        841 GACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATGATGCG 900

Qy        901 TTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTTTGGAT 960
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        901 TTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTTTGGAT 960

Qy        961 CTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACATTGCT 1020
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        961 CTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACATTGCT 1020

Qy       1021 GCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGACCAGCA 1080
              |||||||||||||||||||||||||||||||||||||||||||||||||||| ||||||
Db       1021 GCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGGCCAGCA 1080

Qy       1081 GATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAACAAGGG 1140
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1081 GATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAACAAGGG 1140

Qy       1141 GATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTATTGAA 1200
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1141 GATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTATTGAA 1200

Qy       1201 ATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCA 1260
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1201 ATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCA 1260

Qy       1261 ATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCG------------ 1307
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1261 ATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGGTAACCTTCAC 1320

Qy       1308 ------------------------------------------------------------ 1307

Db       1321 ATATATCATAATGGGTTCATAATGCTGGTTTCTTTGGAATTAACTGTTTTTGGTCTTGGC 1380

Qy       1308 --------------------------AGTTGCTTTGGCAAGGATTATGTTTCCGATGGAG 1341
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Db       1381 AACAAAAGGAAGTTTTTGTACGATGTAGTTGCTTTGGCGAGGATTATGTTTCCGATGGAG 1440

Qy       1342 GCAAGAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCT 1401
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1441 GCAAGAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCT 1500

Qy       1402 GGTGCAAATCCACCTCCTGAAAGACAACGGACAACTGTTGATCTAAATGAAAGTCCTTTC 1461
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy       1462 ATAATGAAAGAAGAACACTTAGCTCGGATGACAGCACTCTCCAAAACAGTGGAGCTCGGG 1521
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Db       1561 ATAATGAAAGAAGAACACTTAGCTCGGATGACGGCACTCTCCAAAACAGTGGAGCTCGGG 1620

Qy       1522 AAACGCTTTTTCCCGCGATGTTCGAACGTGCTCGACAAGATCATGGATGATGAAACTGAT 1581
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1621 AAACGCTTTTTCCCGCGATGTTCGAACGTGCTCGACAAGATCATGGATGATGAAACTGAT 1680

Qy       1582 CCGGTTTCCCTCGGAAGAGACACGTCCGCGGAGAAGAGGAAGAGGTTTCATGACCTGCAG 1641
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1681 CCGGTTTCCCTCGGAAGAGACACGTCCGCGGAGAAGAGGAAGAGGTTTCATGACCTGCAG 1740

Qy       1642 GATGTTCTTCAGAAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCG 1701
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Db       1741 GATGTTCTTCAGAAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCG 1800

Qy       1702 TCGTCGTCGTCATCGACATCGATCGGGGCCATTCGACCAAGGAGATGA 1749
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Db       1801 TCGTCGTCGTCATCGACATCGATCGGGGCCATTCGACCAAGGAGATGA 1848
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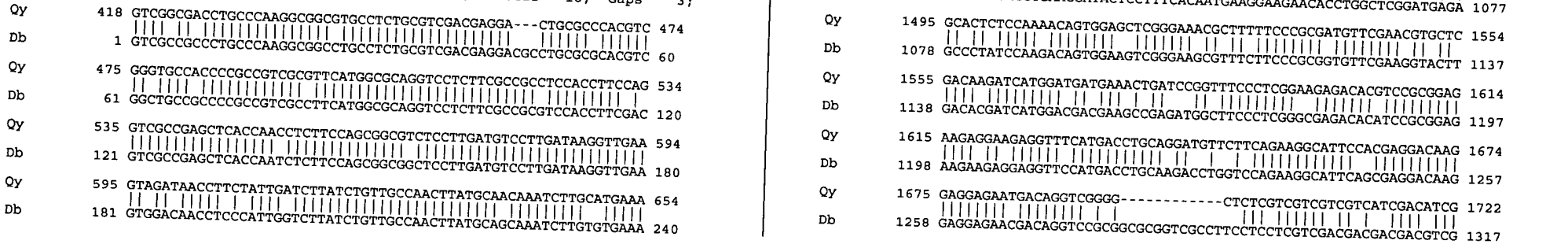
RESULT 3
US-10-374-780A-596
; Sequence 596, Application US/10374780A
; Publication No. US20040019927A1
; GENERAL INFORMATION:
; APPLICANT: Sherman, Bradley K
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Heard, Jacqueline E
; APPLICANT: Haake, Volker
; APPLICANT: Creelman, Robert A
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Adam, Luc J
; APPLICANT: Reuber, T. Lynne
; APPLICANT: Keddie, James
; APPLICANT: Broun, Pierre E
; APPLICANT: Pilgrim, Marsha L
; APPLICANT: Dubell III, Arnold T
; APPLICANT: Pineda, Omaira
; APPLICANT: Yu, Guo-Liang
; TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES IN PLANTS
; FILE REFERENCE: MBI-0047 CIP
; CURRENT APPLICATION NUMBER: US/10/374,780A
; CURRENT FILING DATE: 2003-02-25
; PRIOR APPLICATION NUMBER: 09/837,944
; PRIOR FILING DATE: 2001-04-18
; PRIOR APPLICATION NUMBER: 60/310,847
; PRIOR FILING DATE: 2001-08-09
; PRIOR APPLICATION NUMBER: 09/934,455
; PRIOR FILING DATE: 2001-08-22
; PRIOR APPLICATION NUMBER: 60/336,049
; PRIOR FILING DATE: 2001-11-19
; PRIOR APPLICATION NUMBER: 60/338,692
; PRIOR FILING DATE: 2001-12-11
; PRIOR APPLICATION NUMBER: 10/171,468
; PRIOR FILING DATE: 2002-06-14
; PRIOR APPLICATION NUMBER: 10/225,066
; PRIOR FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 10/225,067
; PRIOR FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 10/225,068
; PRIOR FILING DATE: 2002-08-09
; NUMBER OF SEQ ID NOS: 2906
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 596
; LENGTH: 1773
; TYPE: DNA
; ORGANISM: Zea mays
; FEATURE:
; OTHER INFORMATION: Predicted polypeptide sequence is orthologous to G278
US-10-374-780A-596

Query Match 45.5%; Score 928.4; DB 16; Length 1773;
Best Local Similarity 82.3%; Pred. No. 8.4e-209;
Matches 1109; Conservative 0; Mismatches 221; Indels 18; Gaps 3;



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RESULT 4
US-10-425-115-61591
; Sequence 61591, Application US/10425115
; Publication No. US20040214272A1
; GENERAL INFORMATION:
;  APPLICANT: La Rosa, Thomas J.
;  APPLICANT:  Kovalic, David K.
;  APPLICANT:  Zhou, Yihua
;  APPLICANT:  Cao, Yongwei
;  TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
;  TITLE OF INVENTION:  Plants
;  FILE REFERENCE: 38-21(53222)B
;  CURRENT APPLICATION NUMBER: US/10/425,115
;  CURRENT FILING DATE:  2003-04-28
;  NUMBER OF SEQ ID NOS: 369326
; SEQ ID NO 61591
;   LENGTH: 1767
;   TYPE: DNA
;   ORGANISM: Zea mays
;   FEATURE:
;   OTHER INFORMATION: Clone ID: MRT4577_156165C.1
US-10-425-115-61591

  Query Match             45.4%;  Score 925.2;  DB 18;  Length 1767;
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  Matches 1107;  Conservative    0;  Mismatches  223;  Indels   18;  Gaps    3;

Qy        418 GTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGA---CTGCGCCCACGTC 474
              |||| || |||||||||||||| ||||||||||||||||||||    |||||| ||||||
Db          1 GTCGCCGCCCTGCCCAAGGCGGCCTGCCTCTGCGTCGACGAGGACGCCTGCGCGCACGTC 60

Qy        475 GGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAG 534
              || |||| |||||||||||| |||||||||||||||||||||||||| ||||||||| |
Db         61 GGCTGCCGCCCCGCCGTCGCCTTCATGGCGCAGGTCCTCTTCGCCGCGTCCACCTTCGAC 120

Qy        535 GTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAA 594
              |||||||||||||||| |||||||||||||| ||||||||||||||||||||||||||||
Db        121 GTCGCCGAGCTCACCAATCTCTTCCAGCGGCGGCTCCTTGATGTCCTTGATAAGGTTGAA 180

Qy        595 GTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAA 654
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Db        181 GTGGACAACCTCCCATTGGTCTTATCTGTTGCCAACTTATGCAGCAAATCTTGTGTGAAA 240

Qy        655 CTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAG 714
              |||||||| || ||||||||| | ||||| |||||||||||||| |||||| |||||||
Db        241 CTGCTTGAGAGGTGCCTTGATGTAGTAGTTCGGTCAAACCTTGATATGATTTCTCTTGAA 300

Qy        715 AAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTA 774
              ||    |||||||||||||||    ||  | ||| |||||||| |  ||||||| ||||||
Db        301 AAAAAGTTGCCTCCAGATGTTGAGAAAGAAATTGTTGATGCAAGGGTAAGCCTTGGATTA 360

Qy        775 ATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTT 834
              |||||||  ||| ||||||| || ||||||| |||||| || || ||||||||||  ||
Db        361 GTTTCACCGGAAGACAAGGGCTTCCCTAACATACATGTAAGAAGAATACACAGAGCACTG 420

Qy        835 GACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGAT 894
              || ||||| || || |||||||||| ||||||| ||||  |||||| | || ||||| |||
Db        421 GATTCTGATGACGTGGAGCTAGTCCGGATGCTACTCAAGGAAGGAAAAACTAATCTCGAT 480

Qy        895 GATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTT 954
              ||||| | |||| | ||||| |||||||||||||| ||||| || || ||||| || |||
Db        481 GATGCATATGCATTACACTATGCCGTCGAACATTGCGACTCAAAGATCACAACAGAACTT 540

Qy        955 TTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCAC 1014
              |||||||||| |||||||||| |||||||| |||||||||||||||| || ||||||
Db        541 CTGGATCTCGCGCTTGCAGATGTCAATCATAGGAACCCAAGAGGTTATACGGTCCTTCAC 600

Qy       1015 ATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGA 1074
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Db        601 ATTGCTGCTATGAGGAGGGAACCTAAAATCATTGTCTCTCTTTTGACCAAGGGAGCTCGG 660

Qy       1075 CCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAA 1134
              ||| ||||  | ||||| |||| |||||||| || || ||||| ||| |||| |||||
Db        661 CCATCAGACCTCACATTTGATGACAGAAAAGCAGTGCAGATCTCCAAACGACTTACAAAG 720

Qy       1135 CAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGT 1194
              || |||||||||||||||  ||| || || ||||| |||||||| |||||||| ||||||
Db        721 CATGGGGATTACTTTGGGCCTACTGAGGACGGAAAGCCTTCTCCTAAAGATAGATTATGT 780

Qy       1195 ATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCT 1254
              |||||  |||| |||||||||||||||||||||||||| ||||| ||||||||||||||||
Db        781 ATTGAGGTACTAGAGCAAGCTGAAAGAAGGGACCCGCAACTTGGAGAAGCATCAGTTTCT 840

Qy       1255 CTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCT 1314
              ||||| || | ||| ||   |   || || ||| | || || ||||||||||||||||||
Db        841 CTTGCGATAGAAGGAGACTCTGCGCGTGGGAGGCTACTCTACCTTGAAAACCGAGTTGCT 900

Qy       1315 TTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGAT 1374
              | ||||| ||  ||||||| |||||||||| |||||||||| |||||||||| |||
Db        901 CTAGCAAGAATACTGTTTCCTATGGAGGCAAGGGTAGCAATGGACATTGCTCAAGTCGAT 960

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Db        961 GGAACACTGGAATTCACCCTTGTTTCTAGTGTGAATCTGCCTGCCGAGATACAACGGACA 1020

Qy       1435 ACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACA 1494
                |||||  || || || | |||||||| |||||| |||||||| | |||||||||| |
Db       1021 ---GTTGACCTGAACGATACTCCTTTCACAATGAAGGAAGAACACCTGGCTCGGATGAGA 1077

Qy       1495 GCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTC 1554
              || || |||||  |||||||  ||||||| || || |||||||| |||||||| || ||
Db       1078 GCCCTATCCAAGACAGTGGAAGTCGGGAAGCGTTTCTTCCCGCGGTGTTCGAAGGTACTT 1137

Qy       1555 GACAAGATCATGGATGATGAAACTGATCCGGTTTCCCTCGGAAGAGACACGTCCGCGGAG 1614
              |||| |||||||| || ||| | ||   || |||||||||  |||||| ||||||||||
Db       1138 GACACGATCATGGACGACGAAGCCGAGATGGCTTCCCTCGGGCGAGACACATCCGCGGAG 1197

Qy       1615 AAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCATTCCACGAGGACAAG 1674
              |||| || |||||| |||||||||| ||  |  | |||||||||||  ||||||||||
Db       1198 AAGAAGAGGAGGTTCCATGACCTGCAAGACCTGGTCCAGAAGGCATTCAGCGAGGACAAG 1257

Qy       1675 GAGGAGAATGACAGGTCGGGG------------CTCTCGTCGTCGTCGTCATCGACATCG 1722
              |||||||| |||||||| | |              ||| |||||| || |  |||| |||
Db       1258 GAGGAGAACGACAGGTCCGCGGCGCGGTCACCTTCCTCCTCGTCGACGACGACGACGTCG 1317

Qy       1723 ATCGGGGCCATTCGACCAAGGAGATGAA 1750
              ||||||||| | || ||  |||| ||||
Db       1318 ATCGGGGCCGTCCGGCCTCGGAGGTGAA 1345


RESULT 5
US-10-425-114-32356
; Sequence 32356, Application US/10425114
; Publication No. US20040034888A1
; GENERAL INFORMATION:
;  APPLICANT: Liu, Jingdong
;  APPLICANT:  Zhou, Yihua
;  APPLICANT:  Kovalic, David K.
;  APPLICANT:  Screen, Steven E
;  APPLICANT:  Tabaska, Jack E
;  APPLICANT:  Cao, Yongwei
;  TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
;  TITLE OF INVENTION:  Plants and Uses Thereof for Plant Improvement
;  FILE REFERENCE: 38-21(53313)B
;  CURRENT APPLICATION NUMBER: US/10/425,114
;  CURRENT FILING DATE:  2003-04-28
;  NUMBER OF SEQ ID NOS: 73128
; SEQ ID NO 32356
;   LENGTH: 1326
;   TYPE: DNA
;   ORGANISM: Zea mays
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; FEATURE:
; OTHER INFORMATION: Clone ID: UC-ZMFLB73300C06_FLI
US-10-425-114-32356

Query Match 32.9%; Score 671.8; DB 16; Length 1326;
Best Local Similarity 80.6%; Pred. No. 2.9e-148;
Matches 816; Conservative 0; Mismatches 182; Indels 15; Gaps 2;

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Qy       750 TGATGCACGCCTAAGCCTCGGATTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACA 809
Db         1 TGATGCAAGGGTAAGCCTTGGATTAGTTTCACCGGAAGACAAGGGCTTCCCTAACATACA 60

Qy       810 TGTGAGGAGGATACACAGAGCCCTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCT 869
Db        61 TGTAAGAAGAATACACAGAGCACTGGATTCTGATGACGTGGAGCTAGTCCGGATGCTACT 120

Qy       870 CACTGAAGGACAGACAAATCTTGATGATGCGTTTGCACTGCACTACGCCGTCGAACATTG 929
Db       121 CAAGGAAGGAAAAACTAATCTTGATGATGCATATGCATTACACTATGCCGTCGAACATTG 180

Qy       930 TGACTCCAAAATTACAACCGAGCTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAA 989
Db       181 CGACTCAAAGATCACAACAGAACTTCTGGATCTCGCGCTTGCAGATGTCAATCATAGGAA 240

Qy       990 CCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGT 1049
Db       241 CCCAAGAGGTTATACGGTCCTTCACATTGCTGCTATGAGAAGGGAACCTAAAATCATTGT 300

Qy      1050 CTCCCTTTTAACCAAGGGGGCTCGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGT 1109
Db       301 CTCTCTTTTGACCAAGGGAGCTCGGCCATCAGACCTCACATTTGATGACAGAAAAGCAGT 360

Qy      1110 TCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAA 1169
Db       361 GCAGATCTCTAAACGACTTACAAAGCATGGGGATTACTTTGGGCCTACTGAGGACGGAAA 420

Qy      1170 ACCTTCTCCAAAAGATAGGTTATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCC 1229
Db       421 GCCTTCTCCTAAAGATAGATTATGTATTGAGGTACTAGAGCAAGCTGAAAGAAGGGACCC 480

Qy      1230 ACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTT 1289
Db       481 GCAACTTGGAGAAGCATCAGTTTCTCTTGCGATAGAAGGAGACTCTGCGCGTGGGAGGCT 540

Qy      1290 GCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGT 1349
Db       541 ACTCTACCTTGAAAACCGAGTTGCTCTAGCAAGAATACTGTTTCCTATGGAGGCAAGGGT 600

Qy      1350 AGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCTGGTGCAAA 1409
Db       601 AGCAATGGACATTGCTCAAGTCGATGGAACACTGGAATTCACCCTTGTTTCTAGTGTGAA 660

Qy      1410 TCCACCTCCTGAAAGACAACGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAA 1469
Db       661 TCTGCCTGCCGAGATACAACGGACA---GTTGACCTGAACGATACTCCTTTCACAATGAA 717

Qy      1470 AGAAGAACACTTAGCTCGGATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTT 1529
Db       718 GGAAGAACACCTGGCTCGGATGAGAGCCCTATCCAAGACAGTGGAAGTCGGGAAGCGTTT 777

Qy      1530 TTTCCCGCGATGTTCGAACGTGCTCGACAAGATCATGGATGATGAAACTGATCCGGTTTC 1589
Db       778 CTTCCCGCGGTGTTCGAAGGTACTTGACACGATCATGGACGACGAAGCCGAGATGGCTTC 837

Qy      1590 CCTCGGAAGAGACACGTCCGCGGAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCT 1649
Db       838 CCTCGGGCGAGACACATCCGCGGAGAAGAAGAGGAGGTTCCATGACCTGCAAGACCTGGT 897

Qy      1650 TCAGAAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGG----------CT 1697
Db       898 CCAGAAGGCATTCAGCGAGGACAAGGAGGAGAACGACAGGTCCGCGGCGCGGTCACCTTC 957

Qy      1698 CTCGTCGTCGTCGTCATCGACATCGATCGGGGCCATTCGACCAAGGAGATGAA 1750
Db       958 CTCCTCGTCGACGACGACGTCGATCGGGGCCGTCCGGCCTCGGAGGTGAA 1010
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RESULT 6
US-10-374-780A-595
; Sequence 595, Application US/10374780A
; Publication No. US20040019927A1
; GENERAL INFORMATION:
; APPLICANT: Sherman, Bradley K
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Heard, Jacqueline E
; APPLICANT: Haake, Volker
; APPLICANT: Creelman, Robert A
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Adam, Luc J
; APPLICANT: Reuber, T. Lynne
; APPLICANT: Keddie, James
; APPLICANT: Broun, Pierre E
; APPLICANT: Pilgrim, Marsha L
; APPLICANT: Dubell III, Arnold T
; APPLICANT: Pineda, Omaira
; APPLICANT: Yu, Guo-Liang
; TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES IN PLANTS
; FILE REFERENCE: MBI-0047 CIP
; CURRENT APPLICATION NUMBER: US/10/374,780A
; CURRENT FILING DATE: 2003-02-25
; PRIOR APPLICATION NUMBER: 09/837,944
; PRIOR FILING DATE: 2001-04-18
; PRIOR APPLICATION NUMBER: 60/310,847
; PRIOR FILING DATE: 2001-08-09
; PRIOR APPLICATION NUMBER: 09/934,455
; PRIOR FILING DATE: 2001-08-22
; PRIOR APPLICATION NUMBER: 60/336,049
; PRIOR FILING DATE: 2001-11-19
; PRIOR APPLICATION NUMBER: 60/338,692
; PRIOR FILING DATE: 2001-12-11
; PRIOR APPLICATION NUMBER: 10/171,468
; PRIOR FILING DATE: 2002-06-14
; PRIOR APPLICATION NUMBER: 10/225,066
; PRIOR FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 10/225,067
; PRIOR FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 10/225,068
; PRIOR FILING DATE: 2002-08-09
; NUMBER OF SEQ ID NOS: 2906
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 595
; LENGTH: 633
; TYPE: DNA
; ORGANISM: Oryza sativa
; FEATURE:
; OTHER INFORMATION: Predicted polypeptide sequence is orthologous to G278
US-10-374-780A-595

Query Match 29.3%; Score 598.6; DB 16; Length 633;
Best Local Similarity 98.4%; Pred. No. 4.3e-131;
Matches 615; Conservative 0; Mismatches 9; Indels 1; Gaps 1;

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Qy       822 ACACAGAGCCCTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACA 881
Db         9 ACACAGAGCCCTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGAGA 68

Qy       882 GACAAATCTTGATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAAT 941
Db        69 GACAAATCTTGATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAAT 128

Qy       942 TACAACCGAGCTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTA 1001
Db       129 TACAACCGAGCTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCTAGAGGTTA 188

Qy      1002 TACTGTTCTTCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAAC 1061
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Db        189 TACTGTTCTTCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAAC 248

Qy       1062 CAAGGGGGCTCGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAA 1121

Db        249 CAAGGGGGCTCGGCCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAA 308

Qy       1122 AAGACTAACAAAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAA 1181

Db        309 AAGACTAACAAAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAA 368

Qy       1182 AGATAGGTTATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGA 1241

Db        369 AGATAGGTTATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGA 428

Qy       1242 AGCATCAGTTTCTC-TTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTG 1300

Db        429 AGCATCAGTTTCTCTTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTG 488

Qy       1301 AAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATA 1360

Db        489 AAAACCGAGTTGCTTTGGCGAGGATTATGTTTCCGATGGAAGCAAGAGTAGCAATGGATA 548

Qy       1361 TTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTG 1420

Db        549 TTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCTTGTGCAAATCCACCTTCTT 608

Qy       1421 AAAGACAACGGACAACTGTTGATCT 1445

Db        609 GAAGACAACGGACAACTGTTGATCT 633


RESULT 7
US-10-328-675A-3
; Sequence 3, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
;   LENGTH: 1731
;   TYPE: DNA
;   ORGANISM: Lycopersicon esculentum
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(1728)
;   OTHER INFORMATION: Full length tomato cDNA sequence
US-10-328-675A-3

  Query Match             28.9%;  Score 590.2;  DB 15;  Length 1731;
  Best Local Similarity   65.2%;  Pred. No. 5.7e-129;
  Matches  906;  Conservative    0;  Mismatches  468;  Indels   15;  Gaps    2;

Qy        356 AGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGCGGCC 415

Db        308 AAGAGTATGAGGTGAGTTTTGATGCCGTGGTCAGTGTGCTCGCCTATTTGTATAGTGGAA 367

Qy        416 GCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCG 475

Db        368 AAGTTAGGCCTGCATCTAAAGATGTGTGTGTTTGTGTGGACAATGAGTGCTTGCATGTAG 427

Qy        476 GGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGG 535

Db        428 CTTGTAGGCCAGCTGTGGCCTTCATGGTTCAGGTTTTGTACGCATCCTTTACCTTTCAGA 487

Qy        536 TCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAG 595

Db        488 TCTCTCAATTGGTCGACAAGTTTCAGAGACACCTATTGGATATTCTTGACAAAGCTGTAG 547

Qy        596 TAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAAC 655

Db        548 CAGATGATGTAATGATGGTTTTATCCGTTGCAAACATTTGCGGTAAAGCATGTGAAAGAT 607

Qy        656 TGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGA 715

Db        608 TACTTTCAAGATGCATTGATATTATTGTCAAGTCTAATGTTGATATCATAACCCTTGATA 667

Qy        716 AGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAA 775

Db        668 AGTCCTTGCCTCATGACATTGTAAAACAAATCACTGATTCACGTGCTGAACTTGGTCTGC 727

Qy        776 TTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTG 835

Db        728 AAGGGCCTGAAAGCAATGGTTTTCCTGATAAACATGTTAAGAGGATACATAGAGCATTGG 787

Qy        836 ACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATG 895

Db        788 ACTCTGATGATGTTGAATTACTAAGGATGTTGCTTAAAGAGGGGCATACTACTCTTGATG 847

Qy        896 ATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTT 955

Db        848 ATGCATATGCTCTCCACTATGCTGTAGCATATTGCGATGCAAAGACTACAGCAGAACTTT 907

Qy        956 TGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACA 1015

Db        908 TAGATCTTTCACTTGCTGATGTTAATCATCAAAATCCTAGAGGACACACGGTACTTCATG 967

Qy       1016 TTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGAC 1075

Db        968 TTGCTGCCATGAGGAAAGAACCTAAAATTATAGTGTCCCTTTTAACCAAAGGAGCTAGAC 1027

Qy       1076 CAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAAC 1135

Db       1028 CTTCTGATCTGACATCCGATGGCAAAAAAGCACTTCAAATTGCTAAGAGGCTCACTAGGC 1087

Qy       1136 AAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTA 1195

Db       1088 TTGTAGATTTTACCAAGTCTACAGAGGAAGGAAAATCTGCTCCAAAGGATCGGTTATGCA 1147

Qy       1196 TTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTC 1255

Db       1148 TTGAGATTCTGGAGCAAGCAGAAAGAAGATCCACTACTAGGAGAAGCTTCATTATCTC 1207

Qy       1256 TTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTT 1315

Db       1208 TTGCTATGGCAGGCGATGATTTGCGTATGAAGCTGTTATACCTTGAAAATAGAGTTGGTC 1267

Qy       1316 TGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATG 1375

Db       1268 TGGCTAAACTCCTTTTTCCCATGGAAGCAAAAGTTGCAATGGACATTGCACAAGTTGATG 1327

Qy       1376 GAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAA 1435

Db       1328 GCACGTCTGAATTACCCCTGGCTAGCATGAGGAAGAAGATAGCTGATGCACAGAGGACAA 1387

Qy       1436 CTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACAG 1495

Db       1388 CAGTGGATTTGAACGAGGCTCCTTTCAAGATGAAAGAGGAGCACTTGAATCGGCTTAGGG 1447

Qy       1496 CACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTCG 1555

Db       1448 CTCTCTCTAGAACTGTGGAACTTGGAAAACGGTTCTTTCCACGTTGTTCAGAAGTTCTAA 1507

Qy       1556 ACAAGATCATGGATGATGA------AACTGATCCGGTTTCCCTCGGAAGAGACACGTCCG 1609
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Db       1508 ATAAGATCATGGATGCTGATGACTTGTCTGAGATAGCTTACATGGGGAATGATACAGTAG 1567
Qy       1610 CGGA---------GAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCAT 1660
Db       1568 AAGAGCGTCAACTGAAGAAGCAAAGGTACATGGAACTTCAAGAAATTTTGTCTAAAGCAT 1627
Qy       1661 TCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCATCGACAT 1720
Db       1628 TCACGGAGGATAAAGAAGAATTTGCTAAGACTAACATGTCCTCATCTTGTTCCTCTACAT 1687
Qy       1721 CGATCGGGG 1729
Db       1688 CTAAGGGAG 1696
```

RESULT 8
US-10-328-675A-1
; Sequence 1, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 1767
; TYPE: DNA
; ORGANISM: Nicotiana tabacum
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1764)
; OTHER INFORMATION: Full length tobacco cDNA sequence
US-10-328-675A-1

Query Match 27.6%; Score 563.4; DB 15; Length 1767;
Best Local Similarity 64.3%; Pred. No. 1.2e-122;
Matches 884; Conservative 0; Mismatches 476; Indels 15; Gaps 2;

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Qy        356 AGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGCGGCC 415
Db        341 AAGAGCATGAGGTGAGCTATGATGCTGTAATGAGTGTATTGGCTTATTTGTATAGTGGTA 400
Qy        416 GCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCG 475
Db        401 AAGTTAGGCCTTCACCTAAAGATGTGTGTGTTTGTGTGGACAATGACTGCTCTCATGTGG 460
Qy        476 GGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGG 535
Db        461 CTTGTAGGCCAGCTGTGGCATTCCTGGTTGAGGTTTTGTACACATCATTTACCTTTCAGA 520
Qy        536 TCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAG 595
Db        521 TCTCTGAATTGGTTGACAAGTTTCAGAGACACCTACTGGATATTCTTGACAAAACTGCAG 580
Qy        596 TAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAAC 655
Db        581 CAGACGATGTAATGATGGTTTTATCTGTTGCAAACATTTGTGGTAAAGCATGCGAGAGAT 640
Qy        656 TGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGA 715
Db        641 TGCTTTCAAGCTGCATTGAGATTATTGTCAAGTCTAATGTTGATATCATAACCCTTGATA 700
Qy        716 AGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAA 775
Db        701 AAGCCTTGCCTCATGACATTGTAAAACAAATTACTGATTCACGAGCGGAACTTGGTCTAC 760
Qy        776 TTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTG 835
Db        761 AAGGGCCTGAAAGCAACGGTTTTCCTGATAAACATGTTAAGAGGATACATAGGGCATTGG 820
Qy        836 ACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATG 895
Db        821 ATTCTGATGATGTTGAATTACTACAAATGTTGCTAAGAGAGGGGCATACTACCCTAGATG 880
Qy        896 ATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTT 955
Db        881 ATGCATATGCTCTCCATTATGCTGTAGCGTATTGCGATGCAAAGACTACAGCAGAACTTC 940
Qy        956 TGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACA 1015
Db        941 TAGATCTTGCACTTGCTGATATTAATCATCAAAATTCAAGGGGATACACGGTGCTGCATG 1000
Qy       1016 TTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGAC 1075
Db       1001 TTGCAGCCATGAGGAAAGAGCCTAAAATTGTAGTGTCCCTTTTAACCAAAGGAGCTAGAC 1060
Qy       1076 CAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAAC 1135
Db       1061 CTTCTGATCTGACATCCGATGGAAGAAAAGCACTTCAAATCGCCAAGAGGCTCACTAGGC 1120
Qy       1136 AAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTA 1195
Db       1121 TTGTGGATTTCAGTAAGTCTCCGGAGGAAGGAAAATCTGCTTCGAATGATCGGTTATGCA 1180
Qy       1196 TTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTC 1255
Db       1181 TTGAGATTCTGGAGCAAGCAGAAAGAAGAGACCCTCTGCTAGGAGAAGCTTCTGTATCTC 1240
Qy       1256 TTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTT 1315
Db       1241 TTGCTATGGCAGGCGATGATTTGCGTATGAAGCTGTTATACCTTGAAAATAGAGTTGGCC 1300
Qy       1316 TGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATG 1375
Db       1301 TGGCTAAACTCCTTTTTCCAATGGAAGCTAAAGTTGCAATGGACATTGCTCAAGTTGATG 1360
Qy       1376 GAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAA 1435
Db       1361 GCACTTCTGAGTTCCCACTGGCTAGCATCGGCAAAAAGATGGCTAATGCACAGAGGACAA 1420
Qy       1436 CTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACAG 1495
Db       1421 CAGTAGATTTGAACGAGGCTCCTTTCAAGATAAAAGAGGAGCACTTGAATCGGCTTAGAG 1480
Qy       1496 CACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTCG 1555
Db       1481 CACTCTCTAGAACTGTAGAACTTGGAAAACGCTTCTTTCCACGTTGTTCAGAAGTTCTAA 1540
Qy       1556 ACAAGATCATGGATGATGA------AACTGATCCGGTTTCCCTCGGAAGAGACACGTCCG 1609
Db       1541 ATAAGATCATGGATGCTGATGACTTGTCTGAGATAGCTTACATGGGGAATGATACGGCAG 1600
Qy       1610 CGGA---------GAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCAT 1660
Db       1601 AAGAGCGTCAACTGAAGAAGCAAAGGTACATGGAACTTCAAGAAATTCTGACTAAAGCAT 1660
Qy       1661 TCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCATC 1715
Db       1661 TCACTGAGGATAAAGAAGAATATGATAAGACTAACAACATCTCCTCATCTTGTTC 1715
```

RESULT 9
US-08-908-884-13
; Sequence 13, Application US/08908884
; Publication No. US20020138872A1
; GENERAL INFORMATION:
; APPLICANT: Dong et al.

```
;    TITLE OF INVENTION:  ACQUIRED RESISTANCE GENES AND USES THEREOF
;    NUMBER OF SEQUENCES:  28
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Clark & Elbing LLP
;      STREET:  176 Federal Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02110
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/908,884
;      FILING DATE:
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/023,851
;      FILING DATE:  August 9, 1996
;      APPLICATION NUMBER:  60/035,166
;      FILING DATE:  January 10, 1997
;      APPLICATION NUMBER:  60/046,769
;      FILING DATE:  May 16, 1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Elbing, Karen L
;      REGISTRATION NUMBER:  35,238
;      REFERENCE/DOCKET NUMBER:  00786/339004
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-428-0200
;      TELEFAX:  617-428-7045
;  INFORMATION FOR SEQ ID NO:  13:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2172 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-908-884-13

  Query Match             27.6%;  Score 563.4;  DB 8;  Length 2172;
  Best Local Similarity   64.3%;  Pred. No. 1.3e-122;
  Matches  884;  Conservative    0;  Mismatches  476;  Indels   15;  Gaps    2;

Qy        356 AGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGCGGCC 415
              | |||   |||||  | || || ||   |    ||  | |  ||  | || || ||
Db        580 AAGAGCATGAGGTGAGCTATGATGCTGTAATGAGTGTATTGGCTTATTTGTATAGTGGTA 639

Qy        416 GCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCG 475
              ||  |       || || |  | |||  | || || ||| | |||||| | || || |
Db        640 AAGTTAGGCCTTCACCTAAAGATGTGTGTGTTTGTGTGGACAATGACTGCTCTCATGTGG 699

Qy        476 GGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGG 535
              ||    || || || || ||| |||   |||| | | | |  | |  ||||| |||
Db        700 CTTGTAGGCCAGCTGTGGCATTCCTGGTTGAGGTTTTGTACACATCATTTACCTTTCAGA 759

Qy        536 TCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAG 595
              || | ||  |      ||   || ||| | |  || || ||| | ||||| ||   || ||
Db        760 TCTCTGAATTGGTTGACAAGTTTCAGAGACACCTACTGGATATTCTTGACAAAACTGCAG 819

Qy        596 TAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAAC 655
              |||  |  |  |  || | |||||||||||| ||| | ||    ||| | |||  || |
Db        820 CAGACGATGTAATGATGGTTTTATCTGTTGCAAACATTTGTGGTAAAGCATGCGAGAGAT 879

Qy        656 TGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGA 715
              |||||  ||| ||| |||| ||  | |||  ||| ||  |||| || || || ||||| |
Db        880 TGCTTTCAAGCTGCATTGAGATTATTGTCAAGTCTAATGTTGATATCATAACCCTTGATA 939

Qy        716 AGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAA 775
              |  | |||||||  ||  || | || || |||| |||| |||         || ||  ||
Db        940 AAGCCTTGCCTCATGACATTGTAAAACAAATTACTGATTCACGAGCGGAACTTGGTCTAC 999

Qy        776 TTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTG 835
              || |||| ||| || |||||| | |||||||| | ||||||||| || ||  | |
Db       1000 AAGGGCCTGAAAGCAACGGTTTTCCTGATAAACATGTTAAGAGGATACATAGGGCATTGG 1059

Qy        836 ACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATG 895
              | ||||| ||||| ||  || |    ||| |||| |  || || || || |  || ||||
Db       1060 ATTCTGATGATGTTGAATTACTACAAATGTTGCTAAGAGAGGGGCATACTACCCTAGATG 1119

Qy        896 ATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTT 955
              |||| | ||| || || || || || |    |||| ||  | || | ||| ||| |||
Db       1120 ATGCATATGCTCTCCATTATGCTGTAGCGTATTGCGATGCAAAGACTACAGCAGAACTTC 1179

Qy        956 TGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACA 1015
              | ||||| |||||||| ||| |||||||  |||  |||| || || || || || ||
Db       1180 TAGATCTTGCACTTGCTGATATTAATCATCAAAATTCAAGGGGATACACGGTGCTGCATG 1239

Qy       1016 TTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGAC 1075
              |||| || | | | | ||||||||||||  | || ||||||||||||||| || ||| |||
Db       1240 TTGCAGCCATGAGGAAAGAGCCTAAAATTGTAGTGTCCCTTTTAACCAAAGGAGCTAGAC 1299

Qy       1076 CAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAAC 1135
              |  | ||| | |||| |||||| ||||||||  |||||||| | || || || || |  |
Db       1300 CTTCTGATCTGACATCCGATGGAAGAAAAGCACTTCAAATCGCCAAGAGGCTCACTAGGC 1359

Qy       1136 AAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTA 1195
              | ||||| |  |  |  | | || |||||||| || || | || ||| ||||||| |
Db       1360 TTGTGGATTTCAGTAAGTCTCCGGAGGAAGGAAAATCTGCTTCGAATGATCGGTTATGCA 1419

Qy       1196 TTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTC 1255
              |||| || |||||||||| |||||||| ||||| |  || |||||||| || || ||||
Db       1420 TTGAGATTCTGGAGCAAGCAGAAAGAAGAGACCCTCTGCTAGGAGAAGCTTCTGTATCTC 1479

Qy       1256 TTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTT 1315
              |||| |||||||| ||  | | ||  | | || | || |||||||  ||||||
Db       1480 TTGCTATGGCAGGCGATGATTTGCGTATGAAGCTGTTATACCTTGAAAATAGAGTTGGCC 1539

Qy       1316 TGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATG 1375
              |||| |   | ||||| ||||| || | ||| |||||||| ||||||||||| ||||
Db       1540 TGGCTAAACTCCTTTTTCCAATGGAAGCTAAAGTTGCAATGGACATTGCTCAAGTTGATG 1599

Qy       1376 GAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAA 1435
              | ||||  || ||    |||| |      | ||          || |  ||| ||||||
Db       1600 GCACTTCTGAGTTCCCACTGGCTAGCATCGGCAAAAAGATGGCTAATGCACAGAGGACAA 1659

Qy       1436 CTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACAG 1495
              | || ||| | || ||  |||||||  || ||||| || |||||   |||| | | ||
Db       1660 CAGTAGATTTGAACGAGGCTCCTTTCAAGATAAAAGAGGAGCACTTGAATCGGCTTAGAG 1719

Qy       1496 CACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTCG 1555
              ||||||| | ||| || || || || ||||||||| || || || ||||||  | || ||
Db       1720 CACTCTCTAGAACTGTAGAACTTGGAAAACGCTTCTTTCCACGTTGTTCAGAAGTTCTAA 1779

Qy       1556 ACAAGATCATGGATGATGA------AACTGATCCGGTTTCCCTCGGAAGAGACACGTCCG 1609
              | |||||||||||||| |||        ||||    | || | | || |  || ||| | |
Db       1780 ATAAGATCATGGATGCTGATGACTTGTCTGAGATAGCTTACATGGGGAATGATACGGCAG 1839

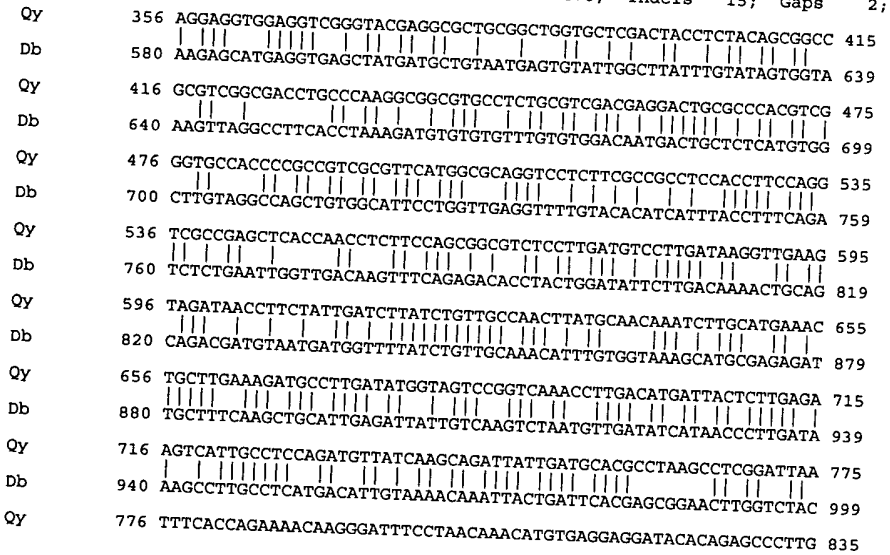
Qy       1610 CGGA---------GAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCAT 1660
              ||           |||| | | ||||     || || || ||  ||||     || ||||
Db       1840 AAGAGCGTCAACTGAAGAAGCAAAGGTACATGGAACTTCAAGAAATTCTGACTAAAGCAT 1899

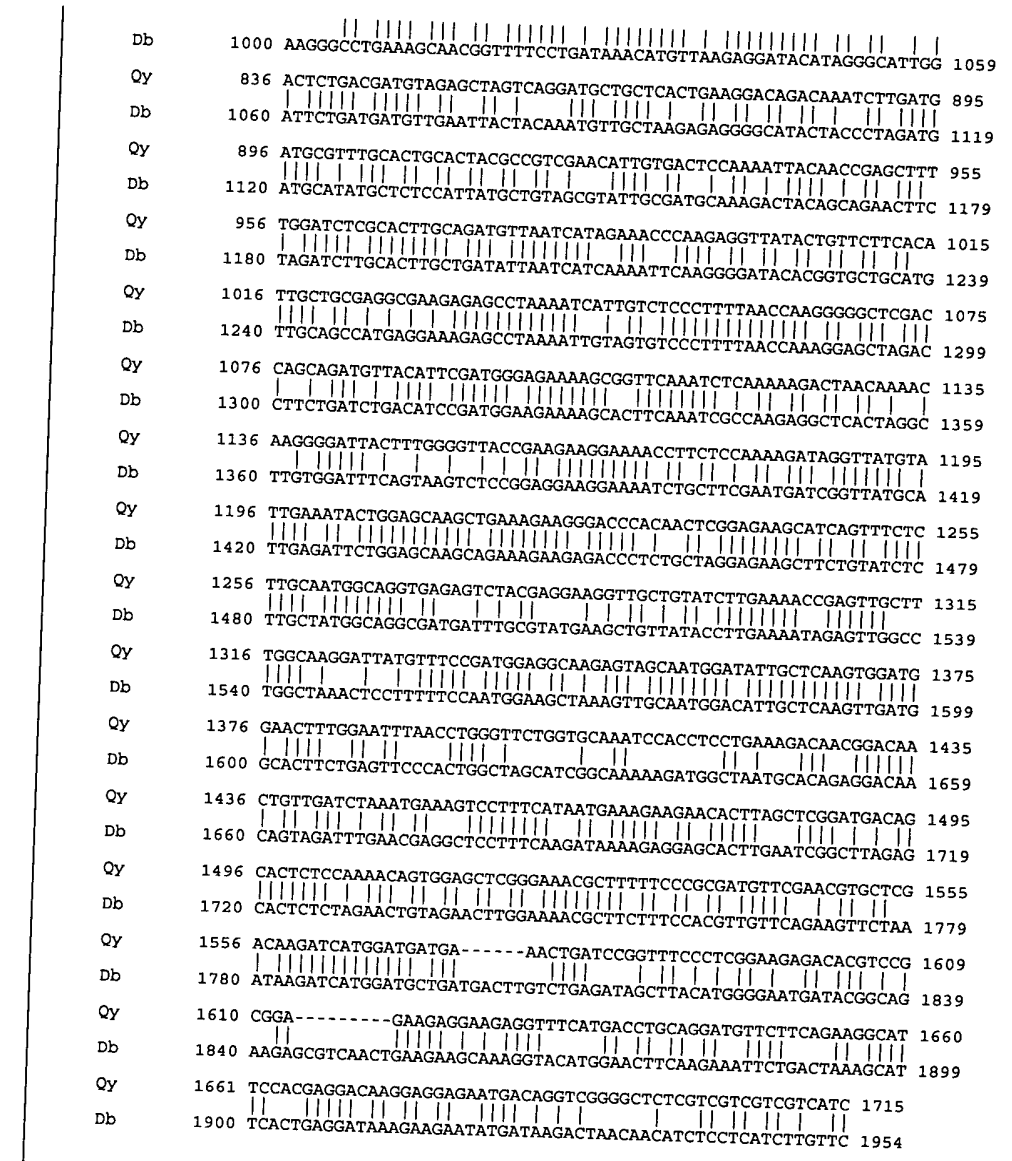
Qy       1661 TCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCATC 1715
              ||  ||||| || || ||  |||| | | |       |  || || || |  ||
Db       1900 TCACTGAGGATAAAGAAGAATATGATAAGACTAACAACATCTCCTCATCTTGTTC 1954


RESULT 10
US-09-908-323-13
; Sequence 13, Application US/09908323
; Patent No. US20020073447A1
;   GENERAL INFORMATION:
;        APPLICANT: Dong et al.
;        TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
;        NUMBER OF SEQUENCES: 28
```

; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/908,323
; FILING DATE: 17-Jul-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/908,884
; FILING DATE: <Unknown>
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, Karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2172 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-09-908-323-13

Query Match 27.6%; Score 563.4; DB 9; Length 2172;
Best Local Similarity 64.3%; Pred. No. 1.3e-122;
Matches 884; Conservative 0; Mismatches 476; Indels 15; Gaps 2;





RESULT 11
US-10-328-675A-63
; Sequence 63, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF

```
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 63
;   LENGTH: 2296
;   TYPE: DNA
;   ORGANISM: Beta vulgaris
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (113)..(1927)
;   OTHER INFORMATION: full-length Sugarbeet cDNA sequence
US-10-328-675A-63

  Query Match             27.5%;  Score 562;  DB 15;  Length 2296;
  Best Local Similarity   61.2%;  Pred. No. 2.8e-122;
  Matches 1014;  Conservative    0;  Mismatches  605;  Indels   39;  Gaps    5;

Qy          86 CCGACGTGGAGGCGCTCCGCCGCCTCTCCGACAACCTCGCCGCGGCGTTCCGCTCGCCCG 145
               ||||||  |  ||  ||  | |||||||| || |||||| | ||   ||||   |  |
Db         261 CCGACGCCGCCGCTCTTCTCCGCCTCTCTGAAAACCTCGACTCGCTTTTCCAACCCTCGC 320

Qy         146 AGGACTTCGCGTTCCTCGCCGACGCGCGCATCGCCGTCCCGGGCGGCGGCGGCGGCGGCG 205
                  ||  |   |  || |        |  |||        | ||    ||| |
Db         321 TTTCTCTCTCCGACTCCGACTCTTTCGCCGACGCTAAAATCGTCGTTTCCGGTGATTCGC 380

Qy         206 GCGACCTGCGGGTGCACCGCTGCGTGCTCTCCGCGCGGAGCCCCTTCCTGCGCGGCGTCT 265
               | ||   |    || ||  ||  ||  ||  |||||   | ||||||  | |||  |  ||   ||  |
Db         381 GTGAAGTCGCCGTTCATCGGTGTGTTCTCTCGTCTCGGAGCTCGTTCTTTCGGTCCGCTT 440

Qy         266 TCGCGCGCCGCGCCGCCGCCGCCGCAGGCGGCGGCGGCGAGGATGGCAGCGAGAGGCTGG 325
               | ||          ||    |   ||  ||  |  ||  ||||    ||  |||||     |
Db         441 TTGCTT----------CGAAACGAGAGAAGGAGAAGGAGAGGGATAAAGAGAGAGTGGTG 490

Qy         326 AGCTCCGGGAGCTCCTCGGCGGCGGCGGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGC 385
               |     | |     ||     |    |  |  ||  | |||| || |  ||  || | |
Db         491 AAGCTTGAG-----CTTAAGGATTTAGCTGGTGATTTTGAGGTTGGATTTGATTCGGTTG 545

Qy         386 GGCTGGTGCTCGACTACCTCTACAGCGGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCC 445
                  |||  | |  ||  | || || |||   ||  |  |  ||||  |  |     ||
Db         546 TTGCGGTTTTAGGTTATTTGTATAGTGGCAAAGTTAGGAATTTGCCTAGAGGAATTTGTG 605

Qy         446 TCTGCGTCGACGAGGACTGCGCCCACGTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGC 505
               | || || || ||||| ||| | || |  |  || |  || || || |  ||  | |
Db         606 TTTGTGTTGATGAGGATTGCTCTCATGAAGCTTGTCGTCCTGCTGTTGATTTTGTTGTTG 665

Qy         506 AGGTCCTCTTCGCCGCCTCCACCTTCCAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGC 565
               ||||  ||||       |   ||  ||| || | | |||  |       || |  ||| |||
Db         666 AGGTTCTCTATTTGTCTCACAAATTCGAGATTGTCGAATTGGTTTCGCTTTATCAGAGGC 725

Qy         566 GTCTCCTTGATGTCCTTGATAAGGTTGAAGTAGATAACCTTCTATTGATCTTATCTGTTG 625
                 || || ||| | ||||| ||| ||| |  |||| || ||||| |  | ||||||| |
Db         726 ACCTACTGGATATTCTTGACAAGATTGCACCAGATGACGTTCTAGTAGTGTTATCTGTCG 785

Qy         626 CCAACTTATGCAACAAATCTTGCATGAAACTGCTTGAAAGATGCCTTGATATGGTAGTCC 685
               |  |  | ||    ||  | ||      | |||| | ||| ||  |||| | | | ||
Db         786 CTGAGATGTGTGGAAATGCGTGTGACGGATTGCTGGCAAGGTGTATTGACAAGATTGTGA 845

Qy         686 GGTCAAACCTTGACATGATTACTCTTGAGAAGTCATTGCCTCCAGATGTTATCAAGCAGA 745
               ||||  |  |||||  | |  ||  |||| || || ||||| |   ||||| | || ||||
Db         846 GGTCCGATATTGACGTAACCACCATTGATAAATCCTTGCCGCAGAATGTTGTGAAACAGA 905

Qy         746 TTATTGATGCACGCCTAAGCCTCGGATTAATTTCACCAGAAAACAAGGGATTTCCTAACA 805
               | ||  ||  | ||        || || || | |  ||| |        |  ||||||  | |
Db         906 TAATCGACACGCGAAAGGAACTTGGGTTTACTGAACCTGGGCGTGTTGAGTTTCCTGATA 965

Qy         806 AACATGTGAGGAGGATACACAGAGCCCTTGACTCTGACGATGTACAGCTAGTCAGGATGC 865
               | |||||||  ||| ||||||||||  | || || || |||||||| ||||||| ||||
Db         966 AGCATGTGAAGAGAATACACAGAGCTTTGGAATCCGATGATGTAGAGTTAGTCAGAATGC 1025

Qy         866 TGCTCACTGAAGGACAGACAAATCTTGATGATGCGTTTGCACTGCACTACGCCGTCGAAC 925
               |  |  |  ||  |  || |||| ||| |||||||| | ||| || ||||| || || | ||
Db        1026 TTTTAAAAGAGCGCCATACAACTCTAGATGATGCATATGCCCTTCACTATGCTGTGGCAC 1085

Qy         926 ATTGTGACTCCAAAATTACAACCGAGCTTTTGGATCTCGCACTTGCAGATGTTAATCATA 985
               |||||||  |||| |  || || |||||| | || || |  ||||||||||||||| ||
Db        1086 ATTGTGATGCCAAGACCACCACGGAGCTTCTTGAGCTTGGGCTTGCAGATGTTAATCTTA 1145

Qy         986 GAAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCA 1045
               |||| | ||| ||| | ||||| || ||  | || || | | ||| |||||||| || |
Db        1146 GAAATCTAAGGGGTCACACTGTGCTACATGTGGCAGCCATGAGAAAAGAGCCTAAGATAA 1205

Qy        1046 TTGTCTCCCTTTTAACCAAGGGGGCTCGACCAGCAGATGTTACATTCGATGGGAGAAAAG 1105
               |||| ||| | |||||||||| || |  ||  | ||| | |||  ||||  | |||||
Db        1206 TTGTATCCTTGTTAACCAAGGGAGCCCATCCGTCTGATATAACATCAGATGATAAAAAAG 1265

Qy        1106 CGGTTCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTTACCGAAGAAG 1165
               |  | ||  ||  |||| ||||||||||||   | ||| | || |     ||| ||| |||
Db        1266 CACTGCAGATAGCAAAGAGACTAACAAAAGCTGTGGACTTCTATAAAACTACAGAACAAG 1325

Qy        1166 GAAAACCTTCTCCAAAAGATAGGTTATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGG 1225
               |||||  | | ||||| ||| |||| || ||||||||||||||||||||||||||||| |
Db        1326 GAAAAGATGCACCAAAGGATCGGTTGTGCATTGAAATACTGGAGCAAGCTGAAAGAAGAG 1385

Qy        1226 ACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAA 1285
               | |||   || |||||||  || ||||||||||||| ||||||  ||   ||| ||    |
Db        1386 AACCATTGCTAGGAGAAGGTTCTGTTTCTCTTGCAAAGGCAGGAGATGATCTGCGTATGA 1445

Qy        1286 GGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAA 1345
               | |  | ||||||||||||  |||||||  | ||  || |  | |||||  ||||| || |
Db        1446 AGCTATTATATCTTGAAAATAGAGTTGCACTTGCTCGGTTGCTCTTTCCAATGGAAGCGA 1505

Qy        1346 GAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCTGGTG 1405
               |||  ||  |||||||||||||||||||||||  |||||||   |||||  |   ||
Db        1506 AAGTGGCTATGGATATTGCTCAAGTGGACGGAACTTCTGAATTCACATTGT--------- 1556

Qy        1406 CAAATCCACCTCCTGAAAGACAACGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAA 1465
               ||||          ||||   || | | |    | || ||  | |||||    ||| || |||
Db        1557 CAAAGAATATAGCTGATGCACGAAGAAATGCGGTGGACTTGAATGAGGCTCCCTTTATAT 1616

Qy        1466 TGAAAGAAGAACACTTAGCTCGGATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAAC 1525
               |||||||  || ||  ||      |||||| |||||| || ||||| || ||||| || || |
Db        1617 TGAAAGAGGAGCATTTGCAGAGGATGAAAGCACTGTCTAAAACTGTTGAGCTTGGCAAGC 1676

Qy        1526 GCTTTTTCCCGCGATGTTCGAACGTGCTCGACAAGATCATG------GATGATGAAACTG 1579
               | || || || || || ||  | || ||  | ||||| |||       || |||  | |
Db        1677 GTTTCTTTCCACGCTGCTCCGATGTTCTTAATAAGATTATGGACGCCGAAGATCTATCAC 1736

Qy        1580 ATCCGGTTTCCCTCGGAAGAGACACGTCCGCGGA---------GAAGAGGAAGAGGTTTC 1630
               | |  |  |  | |||| ||| ||  | | |||         ||||| ||  | |  |
Db        1737 AGCTTGCATTTTTAGGAAAAGATACTCCAGAGGAACGGCAAAGGAAGAGAAAACGATACC 1796

Qy        1631 ATGACCTGCAGGATGTTCTTCAGAAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGT 1690
               |||  ||||| || | | |     ||||| ||    |||||||| || |||  |||| | |
Db        1797 TTGAACTGCAAGACGCTTTAACTAAGGCTTTTACAGAGGACAAAGAAGAGTTTGACCGTT 1856

Qy        1691 CGGGGCTCTCGTCGTCGTCGTCATCGACATCGATCGGG 1728
               |      | || || |||||||| ||||  | || |||
Db        1857 CTACATTATCATCATCGTCGTCGTCGACTCCAATGGGG 1894


RESULT 12
US-10-437-963-51264
; Sequence 51264, Application US/10437963
; Publication No. US20040123343A1
; GENERAL INFORMATION:
;  APPLICANT: La Rosa, Thomas J.
;  APPLICANT:  Kovalic, David K.
;  APPLICANT:  Zhou, Yihua
;  APPLICANT:  Cao, Yongwei
;  APPLICANT:  Wu, Wei
```

```
;  APPLICANT:  Boukharov, Andrey A.
;  APPLICANT:  Barbazuk, Brad
;  APPLICANT:  Li, Ping
;  TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
;  TITLE OF INVENTION:  Plants and Uses Thereof for Plant Improvement
;  FILE REFERENCE: 38-21(53221)B
;  CURRENT APPLICATION NUMBER: US/10/437,963
;  CURRENT FILING DATE:  2003-05-14
;  NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 51264
;   LENGTH: 461
;   TYPE: DNA
;   ORGANISM: Oryza sativa
;   FEATURE:
;   OTHER INFORMATION: Clone ID: PAT_MRT4530_53673C.1
US-10-437-963-51264

  Query Match             21.9%;  Score 447.2;  DB 17;  Length 461;
  Best Local Similarity   98.3%;  Pred. No. 2.1e-95;
  Matches  452;  Conservative    0;  Mismatches    8;  Indels    0;  Gaps    0;

Qy        986 GAAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCA 1045
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          2 GTAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCA 61

Qy       1046 TTGTCTCCCTTTTAACCAAGGGGGCTCGACCAGCAGATGTTACATTCGATGGGAGAAAAG 1105
              ||||||||||||||||||||||||||| ||||||||||||||||||||||||||||||||
Db         62 TTGTCTCCCTTTTAACCAAGGGGGCTCGGCCAGCAGATGTTACATTCGATGGGAGAAAAG 121

Qy       1106 CGGTTCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTTACCGAAGAAG 1165
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        122 CGGTTCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTTACCGAAGAAG 181

Qy       1166 GAAAACCTTCTCCAAAAGATAGGTTATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGG 1225
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        182 GAAAACCTTCTCCAAAAGATAGGTTATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGG 241

Qy       1226 ACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAA 1285
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        242 ACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAA 301

Qy       1286 GGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAA 1345
              |||||||||||||||||||||||||||||||| |||||||||||||||||||| ||||
Db        302 GGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCGAGGATTATGTTTCCGATGGAAGCAA 361

Qy       1346 GAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCTGGTG 1405
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||| |||
Db        362 GAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCTTGTG 421

Qy       1406 CAAATCCACCTCCTGAAAGACAACGGACAACTGTTGATCT 1445
              |||||||||||  ||  |||||||||||||||||||||||
Db        422 CAAATCCACCTTCTTGAAGACAACGGACAACTGTTGATCT 461


RESULT 13
US-10-767-701-21927
; Sequence 21927, Application US/10767701
; Publication No. US20040172684A1
; GENERAL INFORMATION:
;  APPLICANT: Kovalic, David K.
;  APPLICANT:  Zhou, Yihua
;  APPLICANT:  Cao, Yongwei
;  TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
;  TITLE OF INVENTION:  Plants and Uses Thereof For Plant Improvement
;  FILE REFERENCE: 38-21(53535)B
;  CURRENT APPLICATION NUMBER: US/10/767,701
;  CURRENT FILING DATE:  2004-01-29
;  NUMBER OF SEQ ID NOS: 63128
; SEQ ID NO 21927
;   LENGTH: 614
;   TYPE: DNA
;   ORGANISM: Sorghum bicolor
;   FEATURE:
;   OTHER INFORMATION: Clone ID: 13392562
US-10-767-701-21927

  Query Match             21.7%;  Score 442.2;  DB 17;  Length 614;
  Best Local Similarity   83.0%;  Pred. No. 3.5e-94;
  Matches  504;  Conservative    0;  Mismatches  103;  Indels    0;  Gaps    0;

Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
              |||||| |||||||||||||||||| ||||     ||| |||||||| | ||||| || |||
Db          8 GAGAAGGCATTGCCTCCAGATGTTGTCAAAGCAATTGTTGATGCAAGGCTAAGTCTTGGA 67

Qy        772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
              ||| ||| |||||||  |||||||| || |||||||  |||||| || ||  ||||||| ||
Db         68 TTAGTTTTACCAGAGGACAAGGGCTTCCCTAACATACATGTAAGAAGAGTACACAGGGCG 127

Qy        832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
              || || ||||| ||||||||||||||| | ||||| ||||  |||||| | || ||||||
Db        128 CTGGATTCTGATGATGTAGAGCTAGTCCGAATGCTACTCAAGGAAGGAAAAACTAATCTC 187

Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
              |||||||| | |||  | ||||| || |||||||||| ||||| || || ||||| ||
Db        188 GATGATGCATATGCGTTACACTATGCTGTCGAACATTGCGACTCAAAGATCACAACAGAA 247

Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
              ||| ||||||||||||||||||||||||||||||||||| |||||||||| ||||| ||||||
Db        248 CTTCTGGATCTCGCACTTGCAGATGTTAATCATAGGAACCCAAGAGGCTATACGGTTCTT 307

Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
              |||||||||| | | |||| || |||||||||||||||| |||| |||||||| |||
Db        308 CACATTGCTGCTATGAGAAGGGAACCTAAAATCATTGTCTCTCTTTTGACCAAGGGAGCT 367

Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
              || ||  |||| | |||| |||    |||||||| || || ||||| ||| |||| |||
Db        368 CGGCCGTCAGATCTCACATTTGATCACAGAAAAGCAGTACAGATCTCTAAACGACTTACA 427

Qy       1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
              || || ||||||||||||||  ||| || || ||||| ||||||| |||||||| |||
Db        428 AATCATGGGGATTACTTTGGGCCTACTGAGGATGGAAAGCCTTCTCCTAAAGATAGATTA 487

Qy       1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
              |||||||| ||||| |||||||||||||||||||||||||| || ||||||||||||||
Db        488 TGTATTGAGATACTAGAGCAAGCTGAAAGAAGGGACCCACATCTTGGAGAAGCATCAGTT 547

Qy       1252 TCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTT 1311
              |||||||||| | ||| ||   |  || |||||||||| || ||||||||||||||||||
Db        548 TCTCTTGCAATAGAAGGAGACTCTGCGCGTGGAAGGTTGCTCTACCTTGAAAACCGAGTT 607

Qy       1312 GCTTTGG 1318
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RESULT 14
US-08-908-884-2
; Sequence 2, Application US/08908884
; Publication No. US20020138872A1
;  GENERAL INFORMATION:
;    APPLICANT:  Dong et al.
;    TITLE OF INVENTION:  ACQUIRED RESISTANCE GENES AND USES THEREOF
;    NUMBER OF SEQUENCES:  28
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Clark & Elbing LLP
;      STREET:  176 Federal Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02110
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
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;      APPLICATION NUMBER:  US/08/908,884
;      FILING DATE:
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/023,851
;      FILING DATE:  August 9, 1996
;      APPLICATION NUMBER:  60/035,166
;      FILING DATE:  January 10, 1997
;      APPLICATION NUMBER:  60/046,769
;      FILING DATE:  May 16, 1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Elbing, Karen L
;      REGISTRATION NUMBER:  35,238
;      REFERENCE/DOCKET NUMBER:  00786/339004
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-428-0200
;      TELEFAX:  617-428-7045
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2104 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  double
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  Coding Sequence
;      LOCATION:  93...1871
;      OTHER INFORMATION:
US-08-908-884-2

  Query Match             20.7%;  Score 422.2;  DB 8;  Length 2104;
  Best Local Similarity   58.4%;  Pred. No. 2.7e-89;
  Matches  824;  Conservative    0;  Mismatches  556;  Indels   30;  Gaps    4;

Qy        352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411
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Db        444 GCCAAGGATTACGAAGTCGGTTTCGATTCGGTTGTGACTGTTTTGGCTTATGTTTACAGC 503

Qy        412 GGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCAC 471
               || | ||  |    | ||| || |  | |     ||||  |||||| | |||  ||||
Db        504 AGCAGAGTGAGACCGCCGCCTAAAGGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCAC 563

Qy        472 GTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTC 531
              || |  ||||  || || || |  |||||  | |||| ||||     || | || ||||
Db        564 GTGGCTTGCCGGCCGGCGGTGGATTTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTC 623

Qy        532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
               || || | ||  | |  | ||||  ||| |||   |  | ||| ||  | || || |||
Db        624 AAGATCCCTGAATTAATTACTCTCTATCAGAGGCACTTATTGGACGTTGTAGACAAAGTT 683

Qy        592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
              |   ||||  ||   |  | ||  |    |||| || ||||    ||| |||| |||
Db        684 GTTATAGAGGACACATTGGTTATACTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATG 743

Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
              || ||  | || |||||     || ||  | |||  ||| ||  | || ||| |||| ||||
Db        744 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTACATATGGTTAGTCTT 803

Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
              ||  ||||||||||||   |||  || | ||  |||| ||||||  |||    |  || ||
Db        804 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 863

Qy        772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
              ||      |||  ||   |||            ||||||||   ||   |||| |  ||
Db        864 TTGGAGGTACCTAAAGTAAAG------------AAACATGTCTCGAATGTACATAAGGCA 911

Qy        832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
              |||||||| || ||| | ||| |||||| | ||||  | |  ||  ||  || |||||
Db        912 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 971

Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
              |||||||||| ||| || || | ||| || | | ||||  |    || |  |||| ||
Db        972 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 1031

Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
              |||||  | || |  ||||| ||||| || ||||| || || || || ||||| || |||
Db       1032 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1091

Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
              ||  |||||||| ||| |  ||||  || | ||  | || || ||    || || ||
Db       1092 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1151

Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
              |  || |||| |  || || || || ||||  ||  |    ||| |||||  |   ||
Db       1152 AGTGCATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1211

Qy       1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
              |     |  || |    |    | | ||  || | || | |||||  ||||   |  ||
Db       1212 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1271

Qy       1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
              ||| | |||||||| |||||||  || | | | || | |    |  |||| |   |
Db       1272 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1331

Qy       1252 TCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTT 1311
              ||| ||||| |||| |  ||    |    | | ||||  |||||||||  |||||
Db       1332 TCTTTTGCAGTGGCGGCCGATGAATTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTT 1391

Qy       1312 GCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG 1371
              ||  | ||       | | ||||| | ||| |||  ||  |||||||| || ||  || ||
Db       1392 GCACTTGCTCAACGTCTTTTTCCAACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATG 1451

Qy       1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428
              | ||||| |  || ||  |   ||    |   |  | |  |   |||  |   |
Db       1452 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1511

Qy       1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488
              | ||| |    | | ||||   |   |||||| |||   ||||||  ||  |  | |
Db       1512 AGAACATCACCGGGTGTAAAGATAGCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGA 1571

Qy       1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAAC 1548
              | | ||| || || ||||| ||||| |||||||||||  || ||||||||  ||||||
Db       1572 CTAAAAGCGCTTTCTAAAACCGTGGAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCA 1631

Qy       1549 GTGCTCGACAAGATCATG------GATGATGAAACTGATCCGGTTTCCCTCGGAAGAGAC 1602
              |||||||| |||| |||        || ||  ||| | | || || |  | |  |||
Db       1632 GTGCTCGACCAGATTATGAACTGTGAGGACTTGACTCAACTGGCTTGCGGAGAAGACGAC 1691

Qy       1603 ACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653
              ||  | | |         | |||| | | ||||      ||  | || ||    ||  ||
Db       1692 ACTGCTGAGAAACGACTACAAAAGAAGCAAAGGTACATGGAAATACAAGAGACACTAAAG 1751

Qy       1654 AAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCA 1713
              ||||| ||     ||||||||    |||    |  |  |||   ||  |    ||| | ||
Db       1752 AAGGCCTTTAGTGAGGACAATTTGGAATTAGGAAATTCGTCCCTGACAGATTCGACTTCT 1811

Qy       1714 TCGACATCGATCGGGGCCATTCGACCAAGG 1743
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Db       1812 TCCACATCGAAATCAACCGGTGGAAAGAGG 1841


RESULT 15
US-09-908-323-2
; Sequence 2, Application US/09908323
; Patent No. US20020073447A1
;   GENERAL INFORMATION:
;        APPLICANT: Dong et al.
;        TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
;        NUMBER OF SEQUENCES: 28
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Clark & Elbing LLP
;             STREET: 176 Federal Street
;             CITY: Boston
;             STATE: MA
;             COUNTRY: USA
;             ZIP: 02110
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;         COMPUTER READABLE FORM:
;              MEDIUM TYPE: Diskette
;              COMPUTER: IBM Compatible
;              OPERATING SYSTEM: DOS
;              SOFTWARE: FastSEQ for Windows Version 2.0
;         CURRENT APPLICATION DATA:
;              APPLICATION NUMBER: US/09/908,323
;              FILING DATE: 17-Jul-2001
;              CLASSIFICATION: <Unknown>
;         PRIOR APPLICATION DATA:
;              APPLICATION NUMBER: 08/908,884
;              FILING DATE: <Unknown>
;              APPLICATION NUMBER: 60/035,166
;              FILING DATE: January 10, 1997
;              APPLICATION NUMBER: 60/046,769
;              FILING DATE: May 16, 1997
;         ATTORNEY/AGENT INFORMATION:
;              NAME: Elbing, Karen L
;              REGISTRATION NUMBER: 35,238
;              REFERENCE/DOCKET NUMBER: 00786/339004
;         TELECOMMUNICATION INFORMATION:
;              TELEPHONE: 617-428-0200
;              TELEFAX: 617-428-7045
;    INFORMATION FOR SEQ ID NO: 2:
;         SEQUENCE CHARACTERISTICS:
;              LENGTH: 2104 base pairs
;              TYPE: nucleic acid
;              STRANDEDNESS: double
;              TOPOLOGY: linear
;         MOLECULE TYPE: cDNA
;         FEATURE:
;              NAME/KEY:  Coding Sequence
;              LOCATION:  93...1871
;              OTHER INFORMATION:
;         SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-908-323-2

  Query Match             20.7%;  Score 422.2;  DB 9;  Length 2104;
  Best Local Similarity   58.4%;  Pred. No. 2.7e-89;
  Matches  824;  Conservative    0;  Mismatches  556;  Indels   30;  Gaps    4;

Qy        352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411
Db        444 GCCAAGGATTACGAAGTCGGTTTCGATTCGGTTGTGACTGTTTTGGCTTATGTTTACAGC 503

Qy        412 GGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCAC 471
Db        504 AGCAGAGTGAGACCGCCGCCTAAAGGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCAC 563

Qy        472 GTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTC 531
Db        564 GTGGCTTGCCGGCCGGCGGTGGATTTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTC 623

Qy        532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
Db        624 AAGATCCCTGAATTAATTACTCTCTATCAGAGGCACTTATTGGACGTTGTAGACAAAGTT 683

Qy        592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
Db        684 GTTATAGAGGACACATTGGTTATACTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATG 743

Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
Db        744 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 803

Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
Db        804 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 863

Qy        772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
Db        864 TTGGAGGTACCTAAAGTAAAG-----------AAACATGTCTCGAATGTACATAAGGCA 911

Qy        832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
Db        912 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 971

Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
Db        972 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 1031

Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
Db       1032 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1091

Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
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Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
Db       1152 AGTGCATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1211

Qy       1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
Db       1212 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1271

Qy       1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
Db       1272 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1331

Qy       1252 TCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTT 1311
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Db       1392 GCACTTGCTCAACGTCTTTTTCCAACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATG 1451

Qy       1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428
Db       1452 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1511

Qy       1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488
Db       1512 AGAACATCACCGGGTGTAAAGATAGCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGA 1571

Qy       1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAAC 1548
Db       1572 CTAAAAGCGCTTTCTAAAACCGTGGAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCA 1631

Qy       1549 GTGCTCGACAAGATCATG------GATGATGAAACTGATCCGGTTTCCCTCGGAAGAGAC 1602
Db       1632 GTGCTCGACCAGATTATGAACTGTGAGGACTTGACTCAACTGGCTTGCGGAGAAGACGAC 1691

Qy       1603 ACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653
Db       1692 ACTGCTGAGAAACGACTACAAAAGAAGCAAAGGTACATGGAAATACAAGAGACACTAAAG 1751

Qy       1654 AAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCA 1713
Db       1752 AAGGCCTTTAGTGAGGACAATTTGGAATTAGGAAATTCGTCCCTGACAGATTCGACTTCT 1811

Qy       1714 TCGACATCGATCGGGGCCATTCGACCAAGG 1743
Db       1812 TCCACATCGAAATCAACCGGTGGAAAGAGG 1841

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Job time : 1107 secs
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OM protein - protein search, using sw model

Run on: January 19, 2005, 15:41:47 ; Search time 41 Seconds
(without alignments)
941.392 Million cell updates/sec

Title: US-09-294-539-4
Perfect score: 2952
Sequence: 1 MEPPTSHVTNAFSDSDSASV.....RSGLSSSSSSTSIGAIRPRR 582

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 478139 seqs, 66318000 residues

Total number of hits satisfying chosen parameters: 478139

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
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5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | % Query Match | Length | DB | ID | Description |
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| 1 | 1737 | 58.8 | 576 | 4 | US-09-519-232-4 | Sequence 4, Appli |
| 2 | 1672.5 | 56.7 | 588 | 4 | US-09-519-232-2 | Sequence 2, Appli |
| 3 | 1629 | 55.2 | 604 | 4 | US-09-519-232-64 | Sequence 64, Appl |
| 4 | 1276 | 43.2 | 593 | 2 | US-08-989-478-2 | Sequence 2, Appli |
| 5 | 1276 | 43.2 | 593 | 3 | US-08-996-685-2 | Sequence 2, Appli |
| 6 | 1276 | 43.2 | 593 | 3 | US-08-880-179-3 | Sequence 3, Appli |
| 7 | 1270 | 43.0 | 593 | 2 | US-08-989-478-8 | Sequence 8, Appli |
| 8 | 1270 | 43.0 | 593 | 3 | US-08-996-685-8 | Sequence 8, Appli |
| 9 | 1222.5 | 41.4 | 579 | 4 | US-09-519-232-6 | Sequence 6, Appli |
| 10 | 1213.5 | 41.1 | 600 | 4 | US-09-519-232-20 | Sequence 20, Appl |
| 11 | 1213.5 | 41.1 | 601 | 4 | US-09-519-232-72 | Sequence 72, Appl |
| 12 | 1188.5 | 40.3 | 521 | 2 | US-08-989-478-12 | Sequence 12, Appl |
| 13 | 1188.5 | 40.3 | 521 | 3 | US-08-996-685-12 | Sequence 12, Appl |
| 14 | 1134 | 38.4 | 469 | 2 | US-08-989-478-10 | Sequence 10, Appl |
| 15 | 1134 | 38.4 | 469 | 3 | US-08-996-685-10 | Sequence 10, Appl |
| 16 | 1087 | 36.8 | 621 | 4 | US-09-551-778-2 | Sequence 2, Appli |
| 17 | 1087 | 36.8 | 621 | 4 | US-09-551-778-4 | Sequence 4, Appli |
| 18 | 1087 | 36.8 | 621 | 4 | US-10-047-593-2 | Sequence 2, Appli |
| 19 | 1087 | 36.8 | 621 | 4 | US-10-047-593-4 | Sequence 4, Appli |
| 20 | 1060.5 | 35.9 | 591 | 4 | US-09-519-232-66 | Sequence 66, Appl |
| 21 | 1052.5 | 35.7 | 397 | 2 | US-08-989-478-14 | Sequence 14, Appl |
| 22 | 1052.5 | 35.7 | 397 | 3 | US-08-996-685-14 | Sequence 14, Appl |
| 23 | 1045.5 | 35.4 | 609 | 4 | US-09-569-804-11 | Sequence 11, Appl |
| 24 | 1045 | 35.4 | 607 | 4 | US-09-569-804-10 | Sequence 10, Appl |
| 25 | 1031 | 34.9 | 586 | 4 | US-09-519-232-8 | Sequence 8, Appli |
| 26 | 1009 | 34.2 | 574 | 4 | US-09-519-232-70 | Sequence 70, Appl |
| 27 | 995 | 33.7 | 475 | 4 | US-09-569-804-4 | Sequence 4, Appli |
| 28 | 971.5 | 32.9 | 601 | 4 | US-09-519-232-18 | Sequence 18, Appl |
| 29 | 844.5 | 28.6 | 409 | 4 | US-09-569-804-21 | Sequence 21, Appl |
| 30 | 825 | 27.9 | 217 | 4 | US-09-519-232-46 | Sequence 46, Appl |
| 31 | 823 | 27.9 | 219 | 4 | US-09-519-232-30 | Sequence 30, Appl |
| 32 | 782.5 | 26.5 | 381 | 4 | US-09-569-804-17 | Sequence 17, Appl |
| 33 | 751 | 25.4 | 261 | 2 | US-08-989-478-16 | Sequence 16, Appl |
| 34 | 751 | 25.4 | 261 | 3 | US-08-996-685-16 | Sequence 16, Appl |
| 35 | 678 | 23.0 | 369 | 4 | US-09-519-232-74 | Sequence 74, Appl |
| 36 | 644 | 21.8 | 165 | 4 | US-09-519-232-38 | Sequence 38, Appl |
| 37 | 614 | 20.8 | 165 | 4 | US-09-519-232-40 | Sequence 40, Appl |
| 38 | 599 | 20.3 | 165 | 4 | US-09-519-232-42 | Sequence 42, Appl |
| 39 | 502.5 | 17.0 | 180 | 4 | US-09-569-804-35 | Sequence 35, Appl |
| 40 | 493 | 16.7 | 165 | 4 | US-09-519-232-58 | Sequence 58, Appl |
| 41 | 485 | 16.4 | 165 | 4 | US-09-519-232-32 | Sequence 32, Appl |
| 42 | 477 | 16.2 | 165 | 4 | US-09-519-232-34 | Sequence 34, Appl |
| 43 | 470 | 15.9 | 165 | 4 | US-09-519-232-48 | Sequence 48, Appl |
| 44 | 461.5 | 15.6 | 158 | 4 | US-09-519-232-50 | Sequence 50, Appl |
| 45 | 450 | 15.2 | 165 | 4 | US-09-519-232-44 | Sequence 44, Appl |

ALIGNMENTS

RESULT 1
US-09-519-232-4
; Sequence 4, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 576
; TYPE: PRT
; ORGANISM: Lycopersicon esculentum
US-09-519-232-4

Query Match 58.8%; Score 1737; DB 4; Length 576;
Best Local Similarity 59.9%; Pred. No. 1e-168;
Matches 349; Conservative 94; Mismatches 108; Indels 32; Gaps 8;

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Qy         11 AFSDSDSAS-------VEEGDADADADVEALRRLSDNLAAAF-RSPEDFAFLADARIAVP 62
                ||||||:  |       : | :    ||| :|:|||: | : |  |  || | |||::  |
Db          6 AFSDSNDISGSSSICCMNESETSL-ADVNSLKRLSETLESIFDASAPDFDFFADAKLLAP 64

Qy         63 GGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVE 122
                 || :: ||||:||||||| : ||           |:| | :|||:||:    :| |
Db         65 ----GGKEIPVHRCILSARSPFFKNVFC----------GKDSSTKLELKELM----KEYE 106

Qy        123 VGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAEL 182
                | ::|:  || |||||:|    |  |:||| :| || | |||||| |||:|: |||:::|
Db        107 VSFDAVVSVLAYLYSGKVRPASKDVCVCVDNECLHVACRPAVAFMVQVLYASFTFQISQL 166

Qy        183 TNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLP 242
                : ||| |||:|||   |:::::|||||:| |:| :|| ||:|::|:||:|:|||:||||
Db        167 VDKFQRHLLDILDKAVADDVMMVLSVANICGKACERLLSRCIDIIVKSNVDIITLDKSLP 226

Qy        243 PDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFA 302
                |::||| |:|  |||  ||: |||:|||:|||||||||||||:|||| || | ||||:|
Db        227 HDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLRMLLKEGHTTLDDAYA 286

Qy        303 LHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADV 362
                ||||| :||:| | |||||:||||||:||||:||||:|| |:|||||||||||||:|:
Db        287 LHYAVAYCDAKTTAELLDLSLADVNHQNPRGHTVLHVAAMRKEPKIIVSLLTKGARPSDL 346

Qy        363 TFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMA 422
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Db        347 TSDGKKALQIAKRLTRLVDFTKSTEEGKSAPKDRLCIEILEQAERRDPLLGEASLSLAMA 406

Qy        423 GESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDL 482

Db        407 GDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSELPLASMRKKIADAQRTTVDL 466

Qy        483 NESPPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRDTSAE-- 538

Db        467 NEAPFKMKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGNDTVEERQ 526

Qy        539 -KRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGAIRP 580

Db        527 LKKQRYMELQEILSKAFTEDKEEFAKTNMSSSCSSTSKGVDKP 569
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RESULT 2
US-09-519-232-2
; Sequence 2, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 588
; TYPE: PRT
; ORGANISM: Nicotiana tabacum
US-09-519-232-2

Query Match 56.7%; Score 1672.5; DB 4; Length 588;
Best Local Similarity 56.8%; Pred. No. 4.2e-162;
Matches 336; Conservative 102; Mismatches 119; Indels 35; Gaps 8;

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Qy         11 AFSDSDSASVEE----------GDADADADVEALRRLSDNLAAAF-RSPEDFAFLAD 56

Db          7 AFSDSNDISGSSSICCIGGGMTEFFSPETSPAEITSLKRLSETLESIFDASLPEFDYFAD 66

Qy         57 ARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGG 116

Db         67 AKLVV---SGPCKEIPVHRCILSARSPFFKNLFC--------GKKEKNSSKVELKEVM-- 113

Qy        117 GGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAAST 176

Db        114 --KEHEVSYDAVMSVLAYLYSGKVRPSPKDVCVCVDNDCSHVACRPAVAFLVEVLYTSFT 171

Qy        177 FQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMIT 236

Db        172 FQISELVDKFQRHLLDILDKTAADDVMMVLSVANICGKACERLLSSCIEIIVKSNVDIIT 231

Qy        237 LEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTN 296

Db        232 LDKALPHDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLQMLLREGHTT 291

Qy        297 LDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKG 356

Db        292 LDDAYALHYAVAYCDAKTTAELLDLALADINHQNSRGYTVLHVAAMRKEPKIVVSLLTKG 351

Qy        357 ARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEAS 416

Db        352 ARPSDLTSDGRKALQIAKRLTRLVDFSKSPEEGKSASNDRLCIEILEQAERRDPLLGEAS 411

Qy        417 VSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQ 476

Db        412 VSLAMAGDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSEFPLASIGKKMANAQ 471
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Qy        477 RTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRD 534

Db        472 RTTVDLNEAPFKIKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGND 531

Qy        535 TSAE---KRKRFHDLQDVLQKAFHEDKEENDR-SGLSSSSSSTSIGAIRPRR 582

Db        532 TAEERQLKKQRYMELQEILTKAFTEDKEEYDKTNNISSSCSSTSKGVDKPNK 583
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RESULT 3
US-09-519-232-64
; Sequence 64, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 64
; LENGTH: 604
; TYPE: PRT
; ORGANISM: Beta vulgaris
US-09-519-232-64

Query Match 55.2%; Score 1629; DB 4; Length 604;
Best Local Similarity 57.4%; Pred. No. 1.2e-157;
Matches 343; Conservative 81; Mismatches 130; Indels 44; Gaps 10;

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Qy         11 AFSDSDSAS----------VEEGDADADADVEALRRLSDNLAAAFR---SPED 50

Db         15 AFSDSNDISNGSSICCVAATTTTTTTAAENSLSFTPDAAALLRLSENLDSLFQPSLSLSD 74

Qy         51 FAFLADARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSER--- 107

Db         75 SDSFADAKIVV---SGDSREVAVHRCVLSSRSSFFRSAFASKREKEK----ERDKERVVK 127

Qy        108 LELRELLGGGGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFM 167

Db        128 LELKDLAG----DFEVGFDSVVAVLGYLYSGKVRNLPRGICVCVDEDCSHEACRPAVDFV 183

Qy        168 AQVLFAASTFQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMV 227

Db        184 VEVLYLSHKFEIVELVSLYQRHLLDILDKIAPDDVLVVLSVAEMCGNACDGLLARCIDKI 243

Qy        228 VRSNLDMITLEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVR 287

Db        244 VRSDIDVTTIDKSLPQNVVKQIIDTRKELGFTEPGRVEFPDKHVKRIHRALESDDVELVR 303

Qy        288 MLLTEGQTNLDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPK 347

Db        304 MLLKERHTTLDDAYALHYAVAHCDAKTTTELLELGLADVNLRNLRGHTVLHVAAMRKEPK 363

Qy        348 IIVSLLTKGARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAER 407

Db        364 IIVSLLTKGAHPSDITSDDKKALQIAKRLTKAVDFYKTTEQGKDAPKDRLCIEILEQAER 423

Qy        408 RDPQLGEASVSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGS 467

Db        424 REPLLGEGSVSLAKAGDDLRMKLLYLENRVALARLLFPMEAKVAMDIAQVDGTSEFTLSK 483

Qy        468 GANPPPERQRTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD--DE 525

Db        484 NI---ADARRNAVDLNEAPFILKEEHLQRMKALSKTVELGKRFFPRCSDVLNKIMDAEDL 540

Qy        526 TDPVSLGRDTSAE---KRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGAIRP 580

Db        541 SQLAFLGKDTPEERQRKRKRYLELQDALTKAFTEDKEEFDRSTLSSSSSSTPMG--RP 596
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RESULT 4
US-08-989-478-2
; Sequence 2, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 593 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-989-478-2

  Query Match             43.2%;  Score 1276;  DB 2;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 1.7e-121;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
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Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                  | ::  |||||||||| | :   |  ||          : :|||:|:     :: |||

Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    ||| :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | ||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:||||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || ||||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
               :  :|| : ||| :|: |||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |    | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 5
US-08-996-685-2
; Sequence 2, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
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;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,379
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,382
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,730
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,021
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,022
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,024
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/875,015
;       FILING DATE:  16-JUL-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Meigs, J. Timothy
;       REGISTRATION NUMBER:  38,241
;       REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (919) 541-8587
;       TELEFAX:  (919) 541-8689
;   INFORMATION FOR SEQ ID NO:  2:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH: 593 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
US-08-996-685-2

  Query Match             43.2%;  Score 1276;  DB 3;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 1.7e-121;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :           || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
               | ::  ||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:|||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :  : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || ||||||||: :|| ||: ||:||:: || || : |      |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
                :  :|| : ||| :|: |||||||||||||||| |||:||: ::    :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
                   |   :|: ::|: |:||| ||  |   | |: |:||||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 6
US-08-880-179-3
; Sequence 3, Application US/08880179
; Patent No. 6091004
;  GENERAL INFORMATION:
;     APPLICANT:  Ryals, John
;     APPLICANT:  Delaney, Terry
;     APPLICANT:  Friedrich, Leslie
;     APPLICANT:  Weymann, Kristianna
;     APPLICANT:  Lawton, Kay
;     APPLICANT:  Ellis, Daniel
;     APPLICANT:  Uknes, Scott
;     APPLICANT:  Jesse, Taco
;     APPLICANT:  Vos, Pieter
;     TITLE OF INVENTION:  GENE ENCODING A PROTEIN INVOLVED IN THE
;     TITLE OF INVENTION:  SIGNAL TRANSDUCTION CASCADE LEADING TO SYSTEMIC ACQUIRED RESIS
;     TITLE OF INVENTION:  IN PLANTS
;     NUMBER OF SEQUENCES:  17
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  No. 6091004artis Corporation
;       STREET:  520 White Plains Road, P.O. Box 2005
;       CITY:  Tarrytown
;       STATE:  New York
;       COUNTRY:  USA
;       ZIP:  10591
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/880,179
;       FILING DATE:
;       CLASSIFICATION:  800
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Meigs, J. Timothy
;       REGISTRATION NUMBER:  38,241
;       REFERENCE/DOCKET NUMBER:  CGC 1909
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (919) 541-8587
;       TELEFAX:  (919) 541-8689
;   INFORMATION FOR SEQ ID NO:  3:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH: 593 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
US-08-880-179-3

  Query Match             43.2%;  Score 1276;  DB 3;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 1.7e-121;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :           || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
               | ::  ||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184
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Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:||||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || ||||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: ||||||||||||||||| |||:||: ::    :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 7
US-08-989-478-8
; Sequence 8, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 593 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-989-478-8

  Query Match           43.0%;  Score 1270;  DB 2;  Length 593;
  Best Local Similarity   47.0%;  Pred. No. 7.1e-121;
  Matches  272;  Conservative  113;  Mismatches  166;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  | | :|:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFEAVFDAPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  ||||||||| | :   |  ||           : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||     | ||:| || | ||| || :|||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:||||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || ||||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: ||||||||||||||||| |||:||: ::    :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |     |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNLSLTDSTSSTS 576


RESULT 8
US-08-996-685-8
; Sequence 8, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
```

```
;     APPLICANT:  Kung, Ruth
;     APPLICANT:  Kessmann, Helmut
;     APPLICANT:  Oostendorp, Michael
;     TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;     NUMBER OF SEQUENCES:  32
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  No. 6031153artis Corporation
;       STREET:  3054 Cornwallis Road
;       CITY:  Research Triangle Park
;       STATE:  No. 6031153th Carolina
;       COUNTRY:  USA
;       ZIP:  27709
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/996,685
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/761,543
;       FILING DATE:  6-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,378
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,379
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,382
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,730
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,021
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,022
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,024
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/875,015
;       FILING DATE:  16-JUL-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Meigs, J. Timothy
;       REGISTRATION NUMBER:  38,241
;       REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (919) 541-8587
;       TELEFAX:  (919) 541-8689
;   INFORMATION FOR SEQ ID NO:  8:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH: 593 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
US-08-996-685-8

  Query Match             43.0%;  Score 1270;  DB 3;  Length 593;
  Best Local Similarity   47.0%;  Pred. No. 7.1e-121;
  Matches  272;  Conservative  113;  Mismatches  166;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||     :           || ||: ||::  | | :|:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFEAVFDAPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                  | ::  ||||||||| | :   |  ||          : :|||:|:     :: |||

Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  ||| |: |    ||| :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:|||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |      |: |:||||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNLSLTDSTSSTS 576


RESULT 9
US-09-519-232-6
; Sequence 6, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT: Weislo, Laura
;  APPLICANT: Willits, Michael
;  APPLICANT: Mengiste, Tesfaye
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: S-30857A/RTP2095
;  CURRENT APPLICATION NUMBER: US/09/519,232
;  CURRENT FILING DATE: 2000-03-06
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
;   LENGTH: 579
;   TYPE: PRT
;   ORGANISM: Brassica napus
US-09-519-232-6

  Query Match             41.4%;  Score 1222.5;  DB 4;  Length 579;
  Best Local Similarity   45.9%;  Pred. No. 5e-116;
  Matches  260;  Conservative  110;  Mismatches  160;  Indels   37;  Gaps   10;

Qy         14 DSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGGGGGGGDLRV 73
              :| |::|    :      :| | : ||::| : | |||  || :||:: :       ::
Db         27 NSGSSTVXPTELXTRPEVSAFQLLSNSLESVFDSPE--AFYSDAKLVL----SDDKEVSF 80

Qy         74 HRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVGYEALRLVLD 133
              |||:|||||     :| : |  ||    :    :|||: |       | :||::::  ||
Db         81 HRCILSARS-----LFFKAALXAAEKVQKSTPVKLELKTL----AAEYDVGFDSVVAVLA 131

Qy        134 YLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTNLFQRRLLDV 193
              |:|||||   ||     | |  | || | ||| || :||: |  ||: ||  ::|| ||||
Db        132 YVYSGRVRPPPKGVSECADXSCCHVACRPAVDFMVEVLYLAFVFQIQELVTMYQRHLLDV 191

Qy        194 LDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPDVIKQIIDAR 253
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Db        192 VDKVXIEDTLVVLKLANICGKACKKLFDKCREIIVKSNVDVVTLKKSLPEXIAKQVIDIR 251

Qy        254 LSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALHYAVEHCDSK 313

Db        252 KELGLEVAE----PEKHVSNIHKALESDDLDLVVMLLKEGHTNLDEAYALHFAVAYCDEK 307

Qy        314 ITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTFDGRKAVQIS 373

Db        308 TARNLLELGFADVNRRNPRGYTVIHVAAMRKEPTLIALLLTKGANALEMSLDGRTALLIA 367

Qy        374 KRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAER-RDPQLGEASVSLAMAGESLRGRLLY 432

Db        368 KQVTKAAECC-ILEKGKLAAKGGVCVEILKQPDNTREPFPEDVSPSLAVAADQFKIRLID 426

Qy        433 LENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDLNESPFIMKEE 492

Db        427 LENRVQMARCLYPMEAQVAMDFARMKGTREFVV----------TTATDLHMEPPKFVEM 475

Qy        493 HLARMTALSKTVELGKRFFPRCSNVLDKIMDDE--TDPVSLGRDT---SAEKRKRFHDLQ 547

Db        476 HQSRLTALSKTVEFGKRFFPRCSKVLDDIVDSEDLTILALVEEDTPEQRQQKRQRFMEIQ 535

Qy        548 DVLQKAFHEDKEENDRSGLSSSSSSTS 574

Db        536 EIVQMAFSKDKEDLGKSSLSASSSSTS 562
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RESULT 10
US-09-519-232-20
; Sequence 20, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 20
; LENGTH: 600
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-09-519-232-20

Query Match 41.1%; Score 1213.5; DB 4; Length 600;
Best Local Similarity 45.8%; Pred. No. 4.4e-115;
Matches 277; Conservative 105; Mismatches 172; Indels 51; Gaps 17;

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Qy          1 MEPPTSHVTNAFSDSDSASVEEGD----ADADAD----------VEALRRLSDNLAAAFR 46

Db          1 MATTTTTTTARFSDSYEFSNTSGNSFFAAESSLDYPTEFLTPPEVSALKLLSNCLESVFD 60

Qy         47 SPEDFAFLADARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSE 106

Db         61 SPE--TFYSDAKLVL----AGGREVSFHRCILSARIP----VF-KSALATVKEQKSSTTV 109

Qy        107 RLELRELLGGGGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAF 166

Db        110 KLQLKEI----ARDYEVGFDSVVAVLAYVYSGRVRSPPKGASACVDDDCCHVACRSKVDF 165

Qy        167 MAQVLFAASTFQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDM 226

Db        166 MVEVLYLSFVFQIQELVTLYERQFLEIVDKVVVEDILVIFKLDTLCGTTYKKLLDRCIEI 225

Qy        227 VVRSNLDMITLEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELV 286

Db        226 IVKSDIELVSLEKSLPQHIFKQIIDIREALCLEPPKLE----RHVKNIYKALDSDDVELV 281

Qy        287 RMLLTEGQTNLDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREP 346

Db        282 KMLLLEGHTNLDEAYALHFAIAHCAVKTAYDLLELELADVNLRNPRGYTVLHVAAMRKEP 341

Qy        347 KIIVSLLTKGARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAE 406

Db        342 KLIISLLMKGANILDTTLDGRTALVIVKRLTKADDYKTSTEDGTPSLKGGLCIEVLEH-E 400

Qy        407 RRDPQLG--EASVSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFN 464

Db        401 QKLEYLSPIEASLSLPVTPEELRMRLLYYENRVALARLLFPVETETVQGIAKLEETCEFT 460

Qy        465 LGSGANPPPE--RQRTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM 522

Db        461 -ASSLEPDHHIGEKRTSLDLNMAPFQIHEKHLSRLRALCKTVELGKRYFKRCS--LDHFM 517

Qy        523 DDE--TDPVSLGRDT---SAEKRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGA 577

Db        518 DTEDLNHLASVEEDTPEKRLQKKQRYMELQETLMKTFSEDKEE---CGKSSTPKPTS--A 572

Qy        578 IRPRR 582

Db        573 VRSNR 577
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RESULT 11
US-09-519-232-72
; Sequence 72, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 72
; LENGTH: 601
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-09-519-232-72

Query Match 41.1%; Score 1213.5; DB 4; Length 601;
Best Local Similarity 45.8%; Pred. No. 4.4e-115;
Matches 277; Conservative 105; Mismatches 172; Indels 51; Gaps 17;

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Qy          1 MEPPTSHVTNAFSDSDSASVEEGD----ADADAD----------VEALRRLSDNLAAAFR 46

Db          2 MATTTTTTTARFSDSYEFSNTSGNSFFAAESSLDYPTEFLTPPEVSALKLLSNCLESVFD 61

Qy         47 SPEDFAFLADARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSE 106

Db         62 SPE--TFYSDAKLVL----AGGREVSFHRCILSARIP----VF-KSALATVKEQKSSTTV 110

Qy        107 RLELRELLGGGGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAF 166

Db        111 KLQLKEI----ARDYEVGFDSVVAVLAYVYSGRVRSPPKGASACVDDDCCHVACRSKVDF 166

Qy        167 MAQVLFAASTFQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDM 226

Db        167 MVEVLYLSFVFQIQELVTLYERQFLEIVDKVVVEDILVIFKLDTLCGTTYKKLLDRCIEI 226

Qy        227 VVRSNLDMITLEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELV 286

Db        227 IVKSDIELVSLEKSLPQHIFKQIIDIREALCLEPPKLE----RHVKNIYKALDSDDVELV 282

Qy        287 RMLLTEGQTNLDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREP 346

Db        283 KMLLLEGHTNLDEAYALHFAIAHCAVKTAYDLLELELADVNLRNPRGYTVLHVAAMRKEP 342
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Qy        347 KIIVSLLTKGARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAE 406
              |:|:||| |||    | | ||| |: | ||||   ||    ||:| || |  ||||:||  |
Db        343 KLIISLLMKGANILDTTLDGRTALVIVKRLTKADDYKTSTEDGTPSLKGGLCIEVLEH-E 401

Qy        407 RRDPQLG--EASVSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFN 464
              ::   |    |||:|| :  | || |||| |||||||::||:|     ||::: | ||
Db        402 QKLEYLSPIEASLSLPVTPEELRMRLLYYENRVALARLLFPVETETVQGIAKLEETCEFT 461

Qy        465 LGSGANPPPE--RQRTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM 522
                |    |      :||::||| :|| : |:||:|: || |||||||:| |||  ||  |
Db        462 -ASSLEPDHHIGEKRTSLDLNMAPFQIHEKHLSRLRALCKTVELGKRYFKRCS--LDHFM 518

Qy        523 DDE--TDPVSLGRDT---SAEKRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGA 577
              | |       |:  ||     :|::|: :||: | | | |||||    | ||:   ||  |
Db        519 DTEDLNHLASVEEDTPEKRLQKKQRYMELQETLMKTFSEDKEE---CGKSSTPKPTS--A 573

Qy        578 IRPRR 582
              :| |
Db        574 VRSNR 578
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RESULT 12
US-08-989-478-12
; Sequence 12, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH: 521 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-989-478-12

  Query Match             40.3%;  Score 1188.5;  DB 2;  Length 521;
  Best Local Similarity   48.0%;  Pred. No. 1.3e-112;
  Matches  251;  Conservative  100;  Mismatches  149;  Indels   23;  Gaps    7;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  |||||||| | :   |  ||          : :|||:|:    :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD 523
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Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMN 520
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RESULT 13
US-08-996-685-12
; Sequence 12, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
```

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;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 521 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-685-12

  Query Match             40.3%;  Score 1188.5;  DB 3;  Length 521;
  Best Local Similarity   48.0%;  Pred. No. 1.3e-112;
  Matches  251;  Conservative  100;  Mismatches  149;  Indels   23;  Gaps    7;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  |||||||||| | :   |  ||          : :|| :|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | ||||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:||||| ::|:    :    | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || ||||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD 523
              :  :|| : ||| :|: |||||||||||||||| |||:||:
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMN 520


RESULT 14
US-08-989-478-10
; Sequence 10, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
```

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;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 469 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-989-478-10

  Query Match             38.4%;  Score 1134;  DB 2;  Length 469;
  Best Local Similarity   51.4%;  Pred. No. 4.1e-107;
  Matches  233;  Conservative   89;  Mismatches  115;  Indels   16;  Gaps    5;

Qy        131 VLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTNLFQRRL 190
              || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||  |:|| |
Db          7 VLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELITLYQRHL 66

Qy        191 LDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPDVIKQII 250
              |||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :::|:||
Db         67 LDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEELVKEII 126

Qy        251 DARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALHYAVEHC 310
              | |  |||  |: |    |||  :|:|||||:|||::|| |  |||||| |||:|| :|
Db        127 DRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALHFAVAYC 182

Qy        311 DSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTFDGRKAV 370
              : |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: | :|| |:
Db        183 NVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATLEGRTAL 242

Qy        371 QISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGESLRGRL 430
              |:|: |   :   : |: | | | |||:|||| ::|:    :   | |:| : |:  |
Db        243 MIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAADELKMTL 302

Qy        431 LYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTVDLNESP 486
              | |||||||: :|| ||: ||:||:: || || : |     :|    :||:  :  :|
Db        303 LDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSPGVKIAP 359

Qy        487 FIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEKR----K 541
              | : ||| :|: |||||||||||||||| |||:||: ::   :: | | :||||    :
Db        360 FRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEKRLQKKQ 419

Qy        542 RFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |: ::|: |:||| ||  |     |: |:||||
Db        420 RYMEIQETLKKAFSEDNLELGNLSLTDSTSSTS 452


RESULT 15
US-08-996-685-10
; Sequence 10, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 469 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-685-10

  Query Match             38.4%;  Score 1134;  DB 3;  Length 469;
  Best Local Similarity   51.4%;  Pred. No. 4.1e-107;
  Matches  233;  Conservative   89;  Mismatches  115;  Indels   16;  Gaps    5;

Qy        131 VLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTNLFQRRL 190
              || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||  |:|| |
Db          7 VLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELITLYQRHL 66

Qy        191 LDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPDVIKQII 250
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Search completed: January 19, 2005, 15:54:20
Job time : 48 secs
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GenCore version 5.1.6


OM protein - protein search, using sw model

Run on: January 19, 2005, 15:51:03 ; Search time 149 Seconds
(without alignments)
1411.211 Million cell updates/sec

Title: US-09-294-539-4
Perfect score: 2952
Sequence: 1 MEPPTSHVTNAFSDSDSASV.....RSGLSSSSSSTSIGAIRPRR 582

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1608061 seqs, 361289386 residues

Total number of hits satisfying chosen parameters: 1608061

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
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2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | % Query Match | Length | DB | ID | Description |
|---|---|---|---|---|---|---|
| 1 | 2934 | 99.4 | 582 | 10 | US-09-848-841-10 | Sequence 10, Appl |
| 2 | 2907.5 | 98.5 | 615 | 15 | US-10-374-780A-597 | Sequence 597, App |
| 3 | 2907.5 | 98.5 | 615 | 16 | US-10-437-963-153749 | Sequence 153749, |
| 4 | 1913 | 64.8 | 447 | 17 | US-10-425-115-246254 | Sequence 246254, |
| 5 | 1737 | 58.8 | 576 | 14 | US-10-328-675A-4 | Sequence 4, Appli |
| 6 | 1672.5 | 56.7 | 588 | 8 | US-08-908-884-14 | Sequence 14, Appl |
| 7 | 1672.5 | 56.7 | 588 | 9 | US-09-908-323-14 | Sequence 14, Appl |
| 8 | 1672.5 | 56.7 | 588 | 14 | US-10-328-675A-2 | Sequence 2, Appli |
| 9 | 1629 | 55.2 | 604 | 14 | US-10-328-675A-64 | Sequence 64, Appl |
| 10 | 1425.5 | 48.3 | 335 | 15 | US-10-425-114-68962 | Sequence 68962, A |
| 11 | 1276 | 43.2 | 593 | 8 | US-08-908-884-3 | Sequence 3, Appli |
| 12 | 1276 | 43.2 | 593 | 9 | US-09-908-323-3 | Sequence 3, Appli |
| 13 | 1276 | 43.2 | 593 | 10 | US-09-934-455-74 | Sequence 74, Appl |
| 14 | 1276 | 43.2 | 593 | 10 | US-09-848-841-17 | Sequence 17, Appl |
| 15 | 1276 | 43.2 | 593 | 13 | US-10-079-035-3 | Sequence 3, Appli |
| 16 | 1276 | 43.2 | 593 | 14 | US-10-225-068-242 | Sequence 242, App |
| 17 | 1276 | 43.2 | 593 | 14 | US-10-225-066A-954 | Sequence 954, App |
| 18 | 1276 | 43.2 | 593 | 15 | US-10-374-780A-48 | Sequence 48, Appl |
| 19 | 1222.5 | 41.4 | 579 | 14 | US-10-328-675A-6 | Sequence 6, Appli |
| 20 | 1213.5 | 41.1 | 600 | 14 | US-10-328-675A-20 | Sequence 20, Appl |
| 21 | 1213.5 | 41.1 | 601 | 10 | US-09-934-455-434 | Sequence 434, App |
| 22 | 1213.5 | 41.1 | 601 | 14 | US-10-328-675A-72 | Sequence 72, Appl |
| 23 | 1213.5 | 41.1 | 601 | 15 | US-10-374-780A-2092 | Sequence 2092, Ap |
| 24 | 1213.5 | 41.1 | 601 | 15 | US-10-412-699B-814 | Sequence 814, App |
| 25 | 1124 | 38.1 | 532 | 15 | US-10-424-599-164227 | Sequence 164227, |
| 26 | 1124 | 38.1 | 532 | 15 | US-10-425-114-38340 | Sequence 38340, A |
| 27 | 1117.5 | 37.9 | 624 | 15 | US-10-374-780A-1466 | Sequence 1466, Ap |
| 28 | 1117.5 | 37.9 | 624 | 16 | US-10-437-963-122865 | Sequence 122865, |
| 29 | 1117.5 | 37.9 | 635 | 10 | US-09-848-841-16 | Sequence 16, Appl |
| 30 | 1060.5 | 35.9 | 591 | 14 | US-10-328-675A-66 | Sequence 66, Appl |
| 31 | 1045.5 | 35.4 | 592 | 13 | US-10-047-593-2 | Sequence 2, Appli |
| 32 | 1045.5 | 35.4 | 592 | 13 | US-10-047-593-4 | Sequence 4, Appli |
| 33 | 1045.5 | 35.4 | 609 | 14 | US-10-318-780-11 | Sequence 11, Appl |
| 34 | 1045 | 35.4 | 607 | 14 | US-10-318-780-10 | Sequence 10, Appl |
| 35 | 1033.5 | 35.0 | 571 | 15 | US-10-424-599-217392 | Sequence 217392, |
| 36 | 1031 | 34.9 | 586 | 14 | US-10-328-675A-8 | Sequence 8, Appli |
| 37 | 1031 | 34.9 | 586 | 15 | US-10-374-780A-2062 | Sequence 2062, Ap |
| 38 | 1031 | 34.9 | 586 | 17 | US-10-739-930-5907 | Sequence 5907, Ap |
| 39 | 1012 | 34.3 | 501 | 16 | US-10-767-701-44737 | Sequence 44737, A |
| 40 | 1009 | 34.2 | 574 | 14 | US-10-328-675A-70 | Sequence 70, Appl |
| 41 | 995 | 33.7 | 475 | 14 | US-10-318-780-4 | Sequence 4, Appli |
| 42 | 987 | 33.4 | 455 | 10 | US-09-848-841-12 | Sequence 12, Appl |
| 43 | 971.5 | 32.9 | 601 | 14 | US-10-328-675A-18 | Sequence 18, Appl |
| 44 | 915 | 31.0 | 204 | 16 | US-10-767-701-53491 | Sequence 53491, A |
| 45 | 846.5 | 28.7 | 409 | 15 | US-10-425-114-39468 | Sequence 39468, A |

ALIGNMENTS

RESULT 1
US-09-848-841-10
; Sequence 10, Application US/09848841
; Publication No. US20030172411A1
; GENERAL INFORMATION:
; APPLICANT: E. I. du Pont de Nemours and Company
; APPLICANT: Butler, Karla
; APPLICANT: Falco, Carl
; APPLICANT: Famodu, Omolayo O.
; APPLICANT: Fang, Yiwen
; APPLICANT: Han, Feng
; APPLICANT: Heppard, Elmer
; APPLICANT: Liu, Zhan-Bin
; APPLICANT: Miao, Gou-Hau
; APPLICANT: Odell, Joan
; APPLICANT: Rafalski, Antoni
; TITLE OF INVENTION: Disease Resistance Factors
; FILE REFERENCE: BB1252 US NA1
; CURRENT APPLICATION NUMBER: US/09/848,841
; CURRENT FILING DATE: 2001-05-04
; PRIOR APPLICATION NUMBER: 60/107,242
; PRIOR FILING DATE: 1998-11-05
; PRIOR APPLICATION NUMBER: US99/25,953
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 10
; LENGTH: 582
; TYPE: PRT
; ORGANISM: Oryza sativa
US-09-848-841-10

Query Match 99.4%; Score 2934; DB 10; Length 582;
Best Local Similarity 99.5%; Pred. No. 2e-246;
Matches 579; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

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RESULT 2
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; Sequence 597, Application US/10374780A
; Publication No. US20040019927A1
; GENERAL INFORMATION:
; APPLICANT: Sherman, Bradley K
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Heard, Jacqueline E
; APPLICANT: Haake, Volker
; APPLICANT: Creelman, Robert A
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Adam, Luc J
; APPLICANT: Reuber, T. Lynne
; APPLICANT: Keddie, James
; APPLICANT: Broun, Pierre E
; APPLICANT: Pilgrim, Marsha L
; APPLICANT: Dubell III, Arnold T
; APPLICANT: Pineda, Omaira
; APPLICANT: Yu, Guo-Liang
; TITLE OF INVENTION: POLYNUCLEOTIDES AND POLYPEPTIDES IN PLANTS
; FILE REFERENCE: MBI-0047 CIP
; CURRENT APPLICATION NUMBER: US/10/374,780A
; CURRENT FILING DATE: 2003-02-25
; PRIOR APPLICATION NUMBER: 09/837,944
; PRIOR FILING DATE: 2001-04-18
; PRIOR APPLICATION NUMBER: 60/310,847
; PRIOR FILING DATE: 2001-08-09
; PRIOR APPLICATION NUMBER: 09/934,455
; PRIOR FILING DATE: 2001-08-22
; PRIOR APPLICATION NUMBER: 60/336,049
; PRIOR FILING DATE: 2001-11-19
; PRIOR APPLICATION NUMBER: 60/338,692
; PRIOR FILING DATE: 2001-12-11
; PRIOR APPLICATION NUMBER: 10/171,468
; PRIOR FILING DATE: 2002-06-14
; PRIOR APPLICATION NUMBER: 10/225,066
; PRIOR FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 10/225,067
; PRIOR FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 10/225,068
; PRIOR FILING DATE: 2002-08-09
; NUMBER OF SEQ ID NOS: 2906
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 597
; LENGTH: 615
; TYPE: PRT
; ORGANISM: Oryza sativa
; FEATURE:
; OTHER INFORMATION: Orthologous to G278
US-10-374-780A-597

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Best Local Similarity 94.1%; Pred. No. 4.4e-244;
Matches 579; Conservative 0; Mismatches 3; Indels 33; Gaps 1;

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Db        601 SSSSSTSIGAIRPRR 615
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RESULT 3
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; Sequence 153749, Application US/10437963
; Publication No. US20040123343A1

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; GENERAL INFORMATION:
;  APPLICANT: La Rosa, Thomas J.
;  APPLICANT:  Kovalic, David K.
;  APPLICANT:  Zhou, Yihua
;  APPLICANT:  Cao, Yongwei
;  APPLICANT:  Wu, Wei
;  APPLICANT:  Boukharov, Andrey A.
;  APPLICANT:  Barbazuk, Brad
;  APPLICANT:  Li, Ping
;  TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
;  TITLE OF INVENTION:  Plants and Uses Thereof for Plant Improvement
;  FILE REFERENCE: 38-21(53221)B
;  CURRENT APPLICATION NUMBER: US/10/437,963
;  CURRENT FILING DATE:  2003-05-14
;  NUMBER OF SEQ ID NOS: 204966
; SEQ ID NO 153749
;   LENGTH: 615
;   TYPE: PRT
;   ORGANISM: Oryza sativa
;   FEATURE:
;   OTHER INFORMATION: Clone ID: PAT_MRT4530_53675C.1.pep
US-10-437-963-153749

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  Best Local Similarity   94.1%;  Pred. No. 4.4e-244;
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Qy        241 LPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDA 300
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Qy        301 FALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPA 360
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Qy        361 DVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLA 420
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Qy        421 MAGESLRGRLLYLENR------------------------------VALARIMFPME 447
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Db        421 MAGESLRGRLLYLENRGNLHIYHNGFIMLVSLELTVFGLGNKRKFLYDVVALARIMFPME 480

Qy        448 ARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDLNESPFIMKEEHLARMTALSKTVELG 507
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 ARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDLNESPFIMKEEHLARMTALSKTVELG 540

Qy        508 KRFFPRCSNVLDKIMDDETDPVSLGRDTSAEKRKRFHDLQDVLQKAFHEDKEENDRSGLS 567
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 KRFFPRCSNVLDKIMDDETDPVSLGRDTSAEKRKRFHDLQDVLQKAFHEDKEENDRSGLS 600

Qy        568 SSSSSTSIGAIRPRR 582
              ||||||||||||||||
Db        601 SSSSSTSIGAIRPRR 615


RESULT 4
US-10-425-115-246254
; Sequence 246254, Application US/10425115
; Publication No. US20040214272A1
; GENERAL INFORMATION:
;  APPLICANT: La Rosa, Thomas J.
;  APPLICANT:  Kovalic, David K.
;  APPLICANT:  Zhou, Yihua
;  APPLICANT:  Cao, Yongwei
;  TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
;  TITLE OF INVENTION:  Plants
;  FILE REFERENCE: 38-21(53222)B
;  CURRENT APPLICATION NUMBER: US/10/425,115
;  CURRENT FILING DATE:  2003-04-28
;  NUMBER OF SEQ ID NOS: 369326
; SEQ ID NO 246254
;   LENGTH: 447
;   TYPE: PRT
;   ORGANISM: Zea mays
;   FEATURE:
;   OTHER INFORMATION: Clone ID: MRT4577_156165C.1.pep
US-10-425-115-246254

  Query Match             64.8%;  Score 1913;  DB 17;  Length 447;
  Best Local Similarity   84.6%;  Pred. No. 1.2e-157;
  Matches  379;  Conservative   31;  Mismatches   32;  Indels    6;  Gaps    3;

Qy        140 VGDLPKAACLCVDED-CAHVGCHPAVAFMAQVLFAASTFQVAELTNLFQRRLLDVLDKVE 198
              |  |||||||||||| |||||| ||||||||||||||| ||||||||||||||||||||
Db          1 VAALPKAACLCVDEDACAHVGCRPAVAFMAQVLFAASTFDVAELTNLFQRRLLDVLDKVE 60

Qy        199 VDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPDVIKQIIDARLSLGL 258
              |||| |:|||||||:|||:|||||||||:|||||||||:||| ||||| |:|:|||:||||
Db         61 VDNLPLVLSVANLCSKSCVKLLERCLDVVVRSNLDMISLEKKLPPDVEKEIVDARVSLGL 120

Qy        259 ISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALHYAVEHCDSKITTEL 318
              :|||:||||| |||||||||||||||||||||| ||:|||||:|||||||||||||||||
Db        121 VSPEDKGFPNIHVRRIHRALDSDDVELVRMLLKEGKTNLDDAYALHYAVEHCDSKITTEL 180

Qy        319 LDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTFDGRKAVQISKRLTK 378
              |||||||||||||||||||| ||||||||||||||:|:||| ||||||||||||
Db        181 LDLALADVNHRNPRGYTVLHIAAMRREPKIIVSLLTKGARPSDLTFDDRKAVQISKRLTK 240

Qy        379 QGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGESLRGRLLYLENRVA 438
              ||||| ||:|||||||||||:|||||||||||||||||: |:| ||||||||||||
Db        241 HGDYFGPTEDGKPSPKDRLCIEVLEQAERRDPQLGEASVSLAIEGDSARGRLLYLENRVA 300

Qy        439 LARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDLNESPFIMKEEHLARMT 498
              ||||:|||||||||||||||| |  |  | | || |||||::|| |||||||||
Db        301 LARILFPMEARVAMDIAQVDGTLEFTLVSSVNLPAEIQR-TVDLNDTPFTMKEEHLARMR 359

Qy        499 ALSKTVELGKRFFPRCSNVLDKIMDDETDPVSLGRDTSAEKRKRFHDLQDVLQKAFHEDK 558
              |||||||:||||||||| ||| ||||| :  |||||||||::|||||||::|||| |||
Db        360 ALSKTVEVGKRFFPRCSKVLDTIMDDEAEMASLGRDTSAEKKRRFHDLQDLVQKAFSEDK 419

Qy        559 EENDRSGL----SSSSSSTSIGAIRPRR 582
              ||||||      |||:::||||:||||
Db        420 EENDRSAARSPSSSSTTTTSIGAVRPRR 447


RESULT 5
US-10-328-675A-4
; Sequence 4, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
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;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
;   LENGTH: 576
;   TYPE: PRT
;   ORGANISM: Lycopersicon esculentum
US-10-328-675A-4

  Query Match           58.8%;  Score 1737;  DB 14;  Length 576;
  Best Local Similarity 59.9%;  Pred. No. 3.7e-142;
  Matches  349;  Conservative   94;  Mismatches  108;  Indels   32;  Gaps    8;

Qy         11 AFSDSDSAS-------VEEGDADADADVEALRRLSDNLAAAF-RSPEDFAFLADARIAVP 62
               |||||:  |       : | :    ||| :|:|||: | : |  | || | |||:: |
Db          6 AFSDSNDISGSSSICCMNESETSL-ADVNSLKRLSETLESIFDASAPDFDFFADAKLLAP 64

Qy         63 GGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVE 122
              || :: |||||:||||||| : ||           |:| | :|||:||:    :| |
Db         65 ----GGKEIPVHRCILSARSPFFKNVFC----------GKDSSTKLELKELM----KEYE 106

Qy        123 VGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAEL 182
              | ::|:  || |||||:|     |  |:||| :| || | |||||| |||:|: |||:::|
Db        107 VSFDAVVSVLAYLYSGKVRPASKDVCVCVDNECLHVACRPAVAFMVQVLYASFTFQISQL 166

Qy        183 TNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLP 242
               : ||| |||:|||   |:::::|||||:| |:| :|| ||:|::|:||:|:|||:||||
Db        167 VDKFQRHLLDILDKAVADDVMMVLSVANICGKACERLLSRCIDIIVKSNVDIITLDKSLP 226

Qy        243 PDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFA 302
              |::||| |:|  |||  ||: |||:|||:|||||||||||||:|||| || | ||||:|
Db        227 HDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLRMLLKEGHTTLDDAYA 286

Qy        303 LHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADV 362
              ||||| :||:| | |||||:|||||:||||:||||:|| |:|||||||||||||:|:
Db        287 LHYAVAYCDAKTTAELLDLSLADVNHQNPRGHTVLHVAAMRKEPKIIVSLLTKGARPSDL 346

Qy        363 TFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMA 422
              | ||:||:||:||||:  |:   ||||| :|||||||||||||||| |||||:|||||
Db        347 TSDGKKALQIAKRLTRLVDFTKSTEEGKSAPKDRLCIEILEQAERRDPLLGEASLSLAMA 406

Qy        423 GESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDL 482
              |: || :|||||||| ||:::|||||:|||||||||| |  | |      : |||||||
Db        407 GDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSELPLASMRKKIADAQRTTVDL 466

Qy        483 NESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRDTSAE-- 538
              ||:|| |||||| |: |||:|||||||||||||| ||:|||  || ::   :| ||  |
Db        467 NEAPFKMKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGNDTVEERQ 526

Qy        539 -KRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGAIRP 580
              |::|: :||::| ||| |||||  :: :||| |||| |  :|
Db        527 LKKQRYMELQEILSKAFTEDKEEFAKTNMSSSCSSTSKGVDKP 569


RESULT 6
US-08-908-884-14
; Sequence 14, Application US/08908884
; Publication No. US20020138872A1
;  GENERAL INFORMATION:
;    APPLICANT:  Dong et al.
;    TITLE OF INVENTION:  ACQUIRED RESISTANCE GENES AND USES THEREOF
;    NUMBER OF SEQUENCES:  28
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Clark & Elbing LLP
;      STREET:  176 Federal Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02110
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/908,884
;      FILING DATE:
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/023,851
;      FILING DATE:  August 9, 1996
;      APPLICATION NUMBER:  60/035,166
;      FILING DATE:  January 10, 1997
;      APPLICATION NUMBER:  60/046,769
;      FILING DATE:  May 16, 1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Elbing, Karen L
;      REGISTRATION NUMBER:  35,238
;      REFERENCE/DOCKET NUMBER:  00786/339004
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-428-0200
;      TELEFAX:  617-428-7045
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  588 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-908-884-14

  Query Match           56.7%;  Score 1672.5;  DB 8;  Length 588;
  Best Local Similarity 56.8%;  Pred. No. 1.6e-136;
  Matches  336;  Conservative  102;  Mismatches  119;  Indels   35;  Gaps    8;

Qy         11 AFSDSDSASVEE-------------GDADADADVEALRRLSDNLAAAF-RSPEDFAFLAD 56
               |||||:  |                 : |:: :|:|||: | : |  |  :| : ||
Db          7 AFSDSNDISGSSSICCIGGGMTEFFSPETSPAEITSLKRLSETLESIFDASLPEFDYFAD 66

Qy         57 ARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGG 116
              |:: |    |    :: ||||:||||||| : :|          |  |  | ::||:|::
Db         67 AKLVV---SGPCKEIPVHRCILSARSPFFKNLFC--------GKKEKNSSKVELKEVM-- 113

Qy        117 GGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAAST 176
               :| || |:|:  || |||||:|    ||   |:||| ||:|| | |||||: :||: : |
Db        114 --KEHEVSYDAVMSVLAYLYSGKVRPSPKDVCVCVDNDCSHVACRPAVAFLVEVLYTSFT 171

Qy        177 FQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMIT 236
              ||:||: | ||| |||:|||    |:::::|||||:| |:|  :||  |::::|:||:|:||
Db        172 FQISELVDKFQRHLLDILDKTAADDVMMVLSVANICGKACERLLSSCIEIIVKSNVDIIT 231

Qy        237 LEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTN 296
              |:|:|| |::||| |:|   |||  ||: |||:|||:|||||||||||||::||| || |
Db        232 LDKALPHDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLQMLLREGHTT 291

Qy        297 LDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKG 356
              ||||:|||||| :||:| | |||||||||:||:| |||||||:|| |:||||:|||||||
Db        292 LDDAYALHYAVAYCDAKTTAELLDLALADINHQNSRGYTVLHVAAMRKEPKIVVSLLTKG 351

Qy        357 ARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEAS 416
              |||:|:| |||||:||:||||:  |:    |||| :  |||||||||||||| |||||
Db        352 ARPSDLTSDGRKALQIAKRLTRLVDFSKSPEEGKSASNDRLCIEILEQAERRDPLLGEAS 411

Qy        417 VSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQ 476
              |||||||: || :|||||||| ||:::|||||:|||||||||||| || | |        |
Db        412 VSLAMAGDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSEFPLASIGKKMANAQ 471

Qy        477 RTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRD 534
              ||||||||:|| :||||| |: |||:|||||||||||||| ||:|||  || ::   :| |
Db        472 RTTVDLNEAPFKIKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGND 531

Qy        535 TSAE---KRKRFHDLQDVLQKAFHEDKEENDR-SGLSSSSSSTSIGAIRPRR 582
              |: |   |::|: :||::| ||| ||||| |: : :||| |||| |  :| :
Db        532 TAEERQLKKQRYMELQEILTKAFTEDKEEYDKTNNISSSCSSTSKGVDKPNK 583
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```
RESULT 7
US-09-908-323-14
; Sequence 14, Application US/09908323
; Patent No. US20020073447A1
;  GENERAL INFORMATION:
;       APPLICANT: Dong et al.
;       TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
;       NUMBER OF SEQUENCES: 28
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Clark & Elbing LLP
;            STREET: 176 Federal Street
;            CITY: Boston
;            STATE: MA
;            COUNTRY: USA
;            ZIP: 02110
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Diskette
;            COMPUTER: IBM Compatible
;            OPERATING SYSTEM: DOS
;            SOFTWARE: FastSEQ for Windows Version 2.0
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/908,323
;            FILING DATE: 17-Jul-2001
;            CLASSIFICATION: <Unknown>
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: 08/908,884
;            FILING DATE: <Unknown>
;            APPLICATION NUMBER: 60/035,166
;            FILING DATE: January 10, 1997
;            APPLICATION NUMBER: 60/046,769
;            FILING DATE: May 16, 1997
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Elbing, Karen L
;            REGISTRATION NUMBER: 35,238
;            REFERENCE/DOCKET NUMBER: 00786/339004
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: 617-428-0200
;            TELEFAX: 617-428-7045
;  INFORMATION FOR SEQ ID NO: 14:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 588 amino acids
;            TYPE: amino acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       MOLECULE TYPE: protein
;       SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-09-908-323-14

  Query Match            56.7%;  Score 1672.5;  DB 9;  Length 588;
  Best Local Similarity  56.8%;  Pred. No. 1.6e-136;
  Matches  336;  Conservative  102;  Mismatches  119;  Indels   35;  Gaps    8;

Qy         11 AFSDSDSASVEE------------GDADADADVEALRRLSDNLAAAF-RSPEDFAFLAD 56
              |||||:  |                 : |:: :|:|||: | : |  |  :| : ||
Db          7 AFSDSNDISGSSSICCIGGGMTEFFSPETSPAEITSLKRLSETLESIFDASLPEFDYFAD 66

Qy         57 ARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGG 116
              |:: |    |   :: ||||:||||||| : :|         |  |  | ::||:|::
Db         67 AKLVV---SGPCKEIPVHRCILSARSPFFKNLFC--------GKKEKNSSKVELKEVM-- 113

Qy        117 GGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAAST 176
                :| || |:|:  || |||||:|    ||  |:||| ||:|| | |||||: :||: : |
Db        114 --KEHEVSYDAVMSVLAYLYSGKVRPSPKDVCVCVDNDCSHVACRPAVAFLVEVLYTSFT 171

Qy        177 FQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMIT 236
              ||::|| : ||| |||:|||   |:::::|||||:| |:| :||  |::::|:||:|:||
Db        172 FQISELVDKFQRHLLDILDKTAADDVMMVLSVANICGKACERLLSSCIEIIVKSNVDIIT 231

Qy        237 LEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTN 296
              |:|:|| |::||| |:|  |||  ||: |||:|||:||||||||||||::||| || |
Db        232 LDKALPHDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLQMLLREGHTT 291

Qy        297 LDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKG 356
              ||||:|||||| :||:| | |||||||||:||:| |||||||:|| |:||||:|||||||
Db        292 LDDAYALHYAVAYCDAKTTAELLDLALADINHQNSRGYTVLHVAAMRKEPKIVVSLLTKG 351

Qy        357 ARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEAS 416
              |||:|:| |||||:||:||||:  |:    |||| :  |||||||||||||||| |||||
Db        352 ARPSDLTSDGRKALQIAKRLTRLVDFSKSPEEGKSASNDRLCIEILEQAERRDPLLGEAS 411

Qy        417 VSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQ 476
              |||||||: || :||||||||| ||:::|||||:|||||||||| || | |         |
Db        412 VSLAMAGDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSEFPLASIGKKMANAQ 471

Qy        477 RTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRD 534
              ||||||||:|| :||||| |: |||:|||||||||||||| ||:|||  || ::   :| |
Db        472 RTTVDLNEAPFKIKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGND 531

Qy        535 TSAE---KRKRFHDLQDVLQKAFHEDKEENDR-SGLSSSSSSTSIGAIRPRR 582
              |: |   |::|: :||::| ||| ||||| |: : :||| |||| |  :| :
Db        532 TAEERQLKKQRYMELQEILTKAFTEDKEEYDKTNNISSSCSSTSKGVDKPNK 583


RESULT 8
US-10-328-675A-2
; Sequence 2, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 588
;   TYPE: PRT
;   ORGANISM: Nicotiana tabacum
US-10-328-675A-2

  Query Match            56.7%;  Score 1672.5;  DB 14;  Length 588;
  Best Local Similarity  56.8%;  Pred. No. 1.6e-136;
  Matches  336;  Conservative  102;  Mismatches  119;  Indels   35;  Gaps    8;

Qy         11 AFSDSDSASVEE------------GDADADADVEALRRLSDNLAAAF-RSPEDFAFLAD 56
              |||||:  |                 : |:: :|:|||: | : |  |  :| : ||
Db          7 AFSDSNDISGSSSICCIGGGMTEFFSPETSPAEITSLKRLSETLESIFDASLPEFDYFAD 66

Qy         57 ARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGG 116
              |:: |    |   :: ||||:||||||| : :|         |  |  | ::||:|::
Db         67 AKLVV---SGPCKEIPVHRCILSARSPFFKNLFC--------GKKEKNSSKVELKEVM-- 113

Qy        117 GGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAAST 176
                :| || |:|:  || |||||:|    ||  |:||| ||:|| | |||||: :||: : |
Db        114 --KEHEVSYDAVMSVLAYLYSGKVRPSPKDVCVCVDNDCSHVACRPAVAFLVEVLYTSFT 171

Qy        177 FQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMIT 236
              ||::|| : ||| |||:|||   |:::::|||||:| |:| :||  |::::|:||:|:||
Db        172 FQISELVDKFQRHLLDILDKTAADDVMMVLSVANICGKACERLLSSCIEIIVKSNVDIIT 231

Qy        237 LEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTN 296
              |:|:|| |::||| |:|  |||  ||: |||:|||:||||||||||||::||| || |
Db        232 LDKALPHDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLQMLLREGHTT 291

Qy        297 LDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKG 356
              ||||:|||||| :||:| | |||||||||:||:| |||||||:|| |:||||:|||||||
Db        292 LDDAYALHYAVAYCDAKTTAELLDLALADINHQNSRGYTVLHVAAMRKEPKIVVSLLTKG 351
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Qy        357 ARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEAS 416
              |||:|:| |||||:||:||||:  |:    |||| :  ||||||||||||||| |||||
Db        352 ARPSDLTSDGRKALQIAKRLTRLVDFSKSPEEGKSASNDRLCIEILEQAERRDPLLGEAS 411

Qy        417 VSLAMAGESLRGRLLYLENRVALARIMFPPMEARVAMDIAQVDGTLEFNLGSGANPPPERQ 476
              |||||||: || :|||||||| ||:::|||||:|||||||||| || | |         |
Db        412 VSLAMAGDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSEFPLASIGKKMANAQ 471

Qy        477 RTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRD 534
              |||||||:|| :||||| |: |||:||||||||||||| ||:|||  || ::   :| |
Db        472 RTTVDLNEAPFKIKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGND 531

Qy        535 TSAE---KRKRFHDLQDVLQKAFHEDKEENDR-SGLSSSSSSTSIGAIRPRR 582
              |: |   |::|: :||::| ||| ||||| |: : :||| |||| |  :| :
Db        532 TAEERQLKKQRYMELQEILTKAFTEDKEEYDKTNNISSSCSSTSKGVDKPNK 583


RESULT 9
US-10-328-675A-64
; Sequence 64, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 64
;   LENGTH: 604
;   TYPE: PRT
;   ORGANISM: Beta vulgaris
US-10-328-675A-64

  Query Match             55.2%;  Score 1629;  DB 14;  Length 604;
  Best Local Similarity   57.4%;  Pred. No. 1e-132;
  Matches  343;  Conservative   81;  Mismatches  130;  Indels   44;  Gaps   10;

Qy         11 AFSDSDSAS----------------VEEGDADADADVEALRRLSDNLAAAFR---SPED 50
              |||||:  |                |       |  || |||:|| : |:   |  |
Db         15 AFSDSNDISNGSSICCVAATTTTTTTAAENSLSFTPDAAALLRLSENLDSLFQPSLSLSD 74

Qy         51 FAFLADARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSER--- 107
              |||:| |    |   :: |||||||:|| | |  || :       |   ||
Db         75 SDSFADAKIVV---SGDSREVAVHRCVLSSRSSFFRSAFASKREKEK----ERDKERVVK 127

Qy        108 LELRELLGGGGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFM 167
              |||::| |    : |||::::  || ||||||:| :||:  |:||||||:|  | ||| |:
Db        128 LELKDLAG----DFEVGFDSVVAVLGYLYSGKVRNLPRGICVCVDEDCSHEACRPAVDFV 183

Qy        168 AQVLFAASTFQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMV 227
              :||: :  |:: || :|:|| |||:|||:  |::|::|||| :|  :|  || ||:| :
Db        184 VEVLYLSHKFEIVELVSLYQRHLLDILDKIAPDDVLVVLSVAEMCGNACDGLLARCIDKI 243

Qy        228 VRSNLDMITLEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVR 287
              |||::|: |::|||| :|:||||| |  ||   |    ||:|||:||||||:||||||||
Db        244 VRSDIDVTTIDKSLPQNVVKQIIDTRKELGFTEPGRVEFPDKHVKRIHRALESDDVELVR 303

Qy        288 MLLTEGQTNLDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPK 347
              ||| |  | ||||:|||||| |||:| |||||:| ||||| || ||:||||:|| |:|||
Db        304 MLLKERHTTLDDAYALHYAVAHCDAKTTTELLELGLADVNLRNLRGHTVLHVAAMRKEPK 363

Qy        348 IIVSLLTKGARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAER 407
              |||||||||| |:|:| | :||:||:|||||  |::  ||:|| :|||||||||||||||
Db        364 IIVSLLTKGAHPSDITSDDKKALQIAKRLTKAVDFYKTTEQGKDAPKDRLCIEILEQAER 423

Qy        408 RDPQLGEASVSLAMAGESLRGRLLYLENRVALARIMFPPMEARVAMDIAQVDGTLEFNLGS 467
              |:| ||| ||||| ||: || :|||||||||||::|||||:|||||||||| || |
Db        424 REPLLGEGSVSLAKAGDDLRMKLLYLENRVALARLLFPMEAKVAMDIAQVDGTSEFTLSK 483

Qy        468 GANPPPERQRTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD--DE 525
                    : :|  |||||:|||:||||| || |||||||||||||||:||:||||  |
Db        484 NI---ADARRNAVDLNEAPFILKEEHLQRMKALSKTVELGKRFFPRCSDVLNKIMDAEDL 540

Qy        526 TDPVSLGRDTSAE---KRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGAIRP 580
              :    ||:||  |   ||||: :||| | ||| |||| ||| |||||||| :|  ||
Db        541 SQLAFLGKDTPEERQRKRKRYLELQDALTKAFTEDKEEFDRSTLSSSSSSTPMG--RP 596


RESULT 10
US-10-425-114-68962
; Sequence 68962, Application US/10425114
; Publication No. US20040034888A1
; GENERAL INFORMATION:
;  APPLICANT: Liu, Jingdong
;  APPLICANT:  Zhou, Yihua
;  APPLICANT:  Kovalic, David K.
;  APPLICANT:  Screen, Steven E
;  APPLICANT:  Tabaska, Jack E
;  APPLICANT:  Cao, Yongwei
;  TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
;  TITLE OF INVENTION:  Plants and Uses Thereof for Plant Improvement
;  FILE REFERENCE: 38-21(53313)B
;  CURRENT APPLICATION NUMBER: US/10/425,114
;  CURRENT FILING DATE:  2003-04-28
;  NUMBER OF SEQ ID NOS: 73128
; SEQ ID NO 68962
;   LENGTH: 335
;   TYPE: PRT
;   ORGANISM: Zea mays
;   FEATURE:
;   OTHER INFORMATION: Clone ID: UC-ZMFLB73300C06_FLI.pep
US-10-425-114-68962

  Query Match             48.3%;  Score 1425.5;  DB 15;  Length 335;
  Best Local Similarity   83.9%;  Pred. No. 2.3e-115;
  Matches  282;  Conservative   24;  Mismatches   25;  Indels    5;  Gaps    2;

Qy        251 DARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALHYAVEHC 310
              |||:|||:|||:|||| |||||||||||||||||| ||:|||||:|||||||||
Db          1 DARVSLGLVSPEDKGFPNIHVRRIHRALDSDDVELVRMLLKEGKTNLDDAYALHYAVEHC 60

Qy        311 DSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTFDGRKAV 370
              |||||||||||||||||||||||||||||| |||||||||||||||:|:||| ||||
Db         61 DSKITTELLDLALADVNHRNPRGYTVLHIAAMRREPKIIVSLLTKGARPSDLTFDDRKAV 120

Qy        371 QISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGESLRGRL 430
              |||||||| ||||| ||:||||||||||||:|||||||||||||||||: |:| ||||
Db        121 QISKRLTKHGDYFGPTEDGKPSPKDRLCIEVLEQAERRDPQLGEASVSLAIEGDSARGRL 180

Qy        431 LYLENRVALARIMFPPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDLNESPFIMK 490
              ||||||||||:|||||||||||||||| | |  | | | || |||||::|| ||
Db        181 LYLENRVALARILFPMEARVAMDIAQVDGTLEFTLVSSVNLPAEIQR-TVDLNDTPFTMK 239

Qy        491 EEHLARMTALSKTVELGKRFFPRCSNVLDKIMDDETDPVSLGRDTSAEKRKRFHDLQDVL 550
              ||||||| |||||||:|||||||| ||| ||||| :  ||||||||||::|||||::
Db        240 EEHLARMRALSKTVEVGKRFFPRCSKVLDTIMDDEAEMASLGRDTSAEKKRRFHDLQDLV 299

Qy        551 QKAFHEDKEENDRSGL----SSSSSSTSIGAIRPRR 582
              |||| |||||||||      |||:::|||||:||||
Db        300 QKAFSEDKEENDRSAARSPSSSSTTTTSIGAVRPRR 335


RESULT 11
US-08-908-884-3
; Sequence 3, Application US/08908884
; Publication No. US20020138872A1
;  GENERAL INFORMATION:
;    APPLICANT:  Dong et al.
```

```
;    TITLE OF INVENTION:  ACQUIRED RESISTANCE GENES AND USES THEREOF
;    NUMBER OF SEQUENCES:  28
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Clark & Elbing LLP
;      STREET:  176 Federal Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02110
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/908,884
;      FILING DATE:
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/023,851
;      FILING DATE:  August 9, 1996
;      APPLICATION NUMBER:  60/035,166
;      FILING DATE:  January 10, 1997
;      APPLICATION NUMBER:  60/046,769
;      FILING DATE:  May 16, 1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Elbing, Karen L
;      REGISTRATION NUMBER:  35,238
;      REFERENCE/DOCKET NUMBER:  00786/339004
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-428-0200
;      TELEFAX:  617-428-7045
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  593 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-908-884-3

  Query Match             43.2%;  Score 1276;  DB 8;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 5.6e-102;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                 | ::  ||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:|||||:|||::|| |  ||||||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | ||||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |    :   : |: | | | |||:||||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || ||||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
               :  :|| : ||| :|: |||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 12
US-09-908-323-3
; Sequence 3, Application US/09908323
; Patent No. US20020073447A1
;   GENERAL INFORMATION:
;        APPLICANT: Dong et al.
;        TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
;        NUMBER OF SEQUENCES: 28
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Clark & Elbing LLP
;             STREET: 176 Federal Street
;             CITY: Boston
;             STATE: MA
;             COUNTRY: USA
;             ZIP: 02110
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Diskette
;             COMPUTER: IBM Compatible
;             OPERATING SYSTEM: DOS
;             SOFTWARE: FastSEQ for Windows Version 2.0
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/908,323
;             FILING DATE: 17-Jul-2001
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/908,884
;             FILING DATE: <Unknown>
;             APPLICATION NUMBER: 60/035,166
;             FILING DATE: January 10, 1997
;             APPLICATION NUMBER: 60/046,769
;             FILING DATE: May 16, 1997
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Elbing, Karen L
;             REGISTRATION NUMBER: 35,238
;             REFERENCE/DOCKET NUMBER: 00786/339004
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: 617-428-0200
;             TELEFAX: 617-428-7045
;   INFORMATION FOR SEQ ID NO: 3:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 593 amino acids
;             TYPE: amino acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: protein
;        SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-908-323-3

  Query Match             43.2%;  Score 1276;  DB 9;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 5.6e-102;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                 | ::  ||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124
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```
Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||    | ||:| || | ||| || :||: | |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |: || |||||||: :|| ||: ||:||:: || || : |      |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
               :  :|| : ||| :|: ||||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:||||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 13
US-09-934-455-74
; Sequence 74, Application US/09934455
; Publication No. US20030121070A1
; GENERAL INFORMATION:
;  APPLICANT: Adam, Luc
;  APPLICANT:  Creelman, Robert
;  APPLICANT:  Dubell, Arnold
;  APPLICANT:  Heard, Jacqueline
;  APPLICANT:  Jiang, Cai-Zhong
;  APPLICANT:  Keddie, James
;  APPLICANT:  Pilgrim, Marsha
;  APPLICANT:  Ratcliffe, Oliver
;  APPLICANT:  Reuber, Lynne
;  APPLICANT:  Riechmann, Jose Luis
;  APPLICANT:  Yu, Guo-Liang
;  APPLICANT:  Pineda, Omaira
;  TITLE OF INVENTION: Genes for Modifying Plant Traits IV
;  FILE REFERENCE: MBI-0025
;  CURRENT APPLICATION NUMBER: US/09/934,455
;  CURRENT FILING DATE:  2001-08-22
;  PRIOR APPLICATION NUMBER: 60/227439
;  PRIOR FILING DATE: 2000-08-22
;  PRIOR APPLICATION NUMBER: MBI-0022
;  PRIOR FILING DATE: 2001-11-16
;  PRIOR APPLICATION NUMBER: MBI-0023
;  PRIOR FILING DATE: 2001-04-17
;  NUMBER OF SEQ ID NOS: 516
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 74
;   LENGTH: 593
;   TYPE: PRT
;   ORGANISM: Arabidopsis thaliana
US-09-934-455-74

  Query Match           43.2%;  Score 1276;  DB 10;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 5.6e-102;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  |||||||||| | :   |  ||           : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |: || |||||||: :|| ||: ||:||:: || || : |      |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
               :  :|| : ||| :|: ||||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:||||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 14
US-09-848-841-17
; Sequence 17, Application US/09848841
; Publication No. US20030172411A1
; GENERAL INFORMATION:
;  APPLICANT: E. I. du Pont de Nemours and Company
;  APPLICANT:  Butler, Karla
;  APPLICANT:  Falco, Carl
;  APPLICANT:  Famodu, Omolayo O.
;  APPLICANT:  Fang, Yiwen
;  APPLICANT:  Han, Feng
;  APPLICANT:  Heppard, Elmer
;  APPLICANT:  Liu, Zhan-Bin
;  APPLICANT:  Miao, Gou-Hau
;  APPLICANT:  Odell, Joan
;  APPLICANT:  Rafalski, Antoni
;  TITLE OF INVENTION: Disease Resistance Factors
;  FILE REFERENCE: BB1252 US NA1
;  CURRENT APPLICATION NUMBER: US/09/848,841
;  CURRENT FILING DATE:  2001-05-04
;  PRIOR APPLICATION NUMBER: 60/107,242
;  PRIOR FILING DATE: 1998-11-05
;  PRIOR APPLICATION NUMBER: US99/25,953
;  PRIOR FILING DATE: 1999-10-04
;  NUMBER OF SEQ ID NOS: 17
;  SOFTWARE: Microsoft Office 97
; SEQ ID NO 17
;   LENGTH: 593
;   TYPE: PRT
;   ORGANISM: Arabidopsis thaliana
US-09-848-841-17

  Query Match           43.2%;  Score 1276;  DB 10;  Length 593;
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```
  Best Local Similarity   47.2%;  Pred. No. 5.6e-102;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  |||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  ||||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 15
US-10-079-035-3
; Sequence 3, Application US/10079035
; Publication No. US20020152499A1
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Delaney, Terry
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Weymann, Kristianna
;    APPLICANT:  Lawton, Kay
;    APPLICANT:  Ellis, Daniel
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Jesse, Taco
;    APPLICANT:  Vos, Pieter
;    TITLE OF INVENTION:  GENE ENCODING A PROTEIN INVOLVED IN THE
;    TITLE OF INVENTION:  SIGNAL TRANSDUCTION CASCADE LEADING TO SYSTEMIC ACQUIRED RESIS
;    TITLE OF INVENTION:  IN PLANTS
;    NUMBER OF SEQUENCES:  17
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. US20020152499A1artis Corporation
;      STREET:  520 White Plains Road, P.O. Box 2005
;      CITY:  Tarrytown
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10591
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/10/079,035
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  09/577,799
;      FILING DATE:
;      APPLICATION NUMBER:  08/880,179
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  CGC 1909
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 593 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-10-079-035-3

  Query Match             43.2%;  Score 1276;  DB 13;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 5.6e-102;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  |||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  ||||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


Search completed: January 19, 2005, 16:05:24
Job time : 152 secs
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